AquaLink® RS

All Button and OneTouch™ Control Panels

Jandy®

Important Safety Precautions

When installing and using this electrical equipment, these basic safety precautions should always be followed:

1. **READ AND FOLLOW ALL INSTRUCTIONS**.
   LIRE LA NOTICE TECHNIQUE.

2. **DANGER** - to reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

3. All electrical work must be performed by a licensed electrician and must conform to all national, state, and local codes.

4. **WARNING: Water temperature in excess of 100°F/38°C may be injurious to your health.**
   AVERTISSEMENT: Il peut être dangereux pour la santé de se plonger dans de l'eau à plus de 100°F/38°C.
   Prolonged immersion in hot water may induce hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6°F/37°C. The symptoms of hyperthermia include dizziness, fainting, drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include: 1) unawareness of impending danger; 2) failure to perceive heat; 3) failure to recognize the need to exit spa; 4) physical inability to exit spa; 5) fetal damage in pregnant women; 6) unconsciousness resulting in a danger of drowning. **WARNING** - **The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.** *La consommation d'alcool ou de drogue augmente considérablement les risques d'hyperthermie mortelle dans une cuve de relaxation.*

5. Install to provide drainage of compartment for electrical components.

6. Install at least five (5) feet (152.4cm) from the inside wall of the pool and tub. Canadian installations must be at least three (3) meters from the water. *Les installations canadiennes doivent se trouver à au moins trois (3) mètres de l'eau.*

7. A ground-fault circuit-interrupter must be provided if this device is used to control underwater lighting fixtures. The conductors on the load side of the ground-fault circuit-interrupter shall not occupy conduit, boxes or enclosures containing other conductors unless the additional conductors are also protected by a ground-fault circuit-interrupter. Refer to local codes for complete details.

8. A terminal bar marked GROUND is provided within the Power Center. To reduce the risk of electrical shock, connect this terminal bar to the grounding terminal of your electric service or supply panel with a continuous green insulated copper wire equivalent in size to the circuit conductors supplying this equipment, but no smaller than No. 12 AWG (3.3 mm). In addition, a second wire connector should be bonded with a No. 8 AWG (4.115mm) copper wire to any metal ladders, water pipes, or other metal within 5 feet (1.52m) of the tub.

9. CONTROL SYSTEM IS INTENDED TO CONTROL HEATERS WITH BUILT-IN HIGH LIMIT CIRCUITS ONLY.

10. PLEASE SAVE THESE INSTRUCTIONS.

SPECIFICATIONS (USA & CANADA):
POWER SUPPLY: 120 Volts A.C.; 60 Hz.; 3 amps.
CONTACT RATING: (High Volt.) 25 amp; 3 h.p. @ 240 Volts A.C.,
                1½ h.p. @ 120 Volts A.C.;
                1500 Watts Incandescent
CONTACT RATING: (Low Volt.) Class Two, 1 amp at 24V A.C.
EMERGENCY SERVICE SWITCHES: All circuits.

DIMENSIONS (USA & CANADA):
Standard Power Center: Height-13¾"; Width-14½"; Depth-5"
Sub Panel Power Center: Height-20"; Width-14½"; Depth-5"
All Button Control Panel: Length-8"; Width-5"; Depth-1¼"
OneTouch Control Panel Height-4½"; Width-4½"; Depth-1¼"
Four Function Switch: Diameter-2¾"

SPECIFICATIONS (EUROPEAN):
POWER SUPPLY: 230-240V~50/60 Hz.; 3 A.
CONTACT RATING: (High Volt.) 25 A; 3 h.p. @ 240 Volts V~
CONTACT RATING: (Low Volt.) Class Two @ 24V~
EMERGENCY SERVICE SWITCHES: All circuits.

DIMENSIONS (EUROPEAN):
Standard Power Center: Height-35.3cm; Width-37.2cm; Depth-12.8cm
Sub Panel Power Center: Height-51.3cm; Width-37.2cm; Depth-12.8cm
All Button Control Panel: Length-20.5cm; Width-12.8cm; Depth-3.2cm
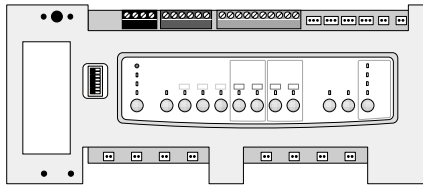OneTouch Control Panel Height-11.43cm; Width-11.43cm; Depth-3 cm
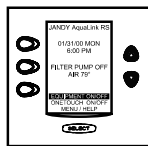Four Function Switch: Diameter-7.1cm

Table of Contents

System Overview

Controller Package (required)

Power Center Bezel

OneTouch Control Panel
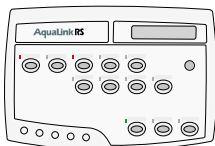
All Button Control Panel

Temp. Sensors
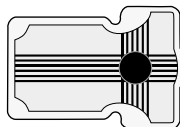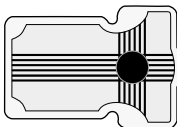
Intake and Return JVA Valve Actuators
(Included with Pool/Spa Combos only)

Options and Accessories
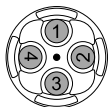
Four Function Switch*

SpaLink RS

Radio Remote
(Includes Transmitter, Receiver & Interface)*

Solar Sensor
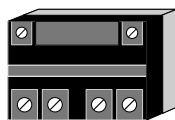
Additional Relays
• 3-HP Relay
• Light Dimming Relay
• 2-speed Relay*

*Not Available in CE Models

Power Center (required, choose one)
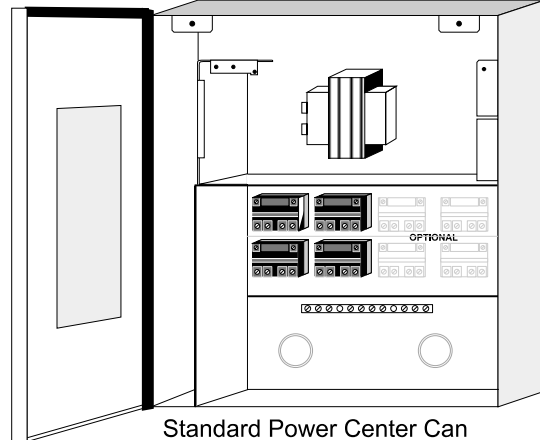
OPTIONAL

Standard Power Center Can
(Includes 4 relays)
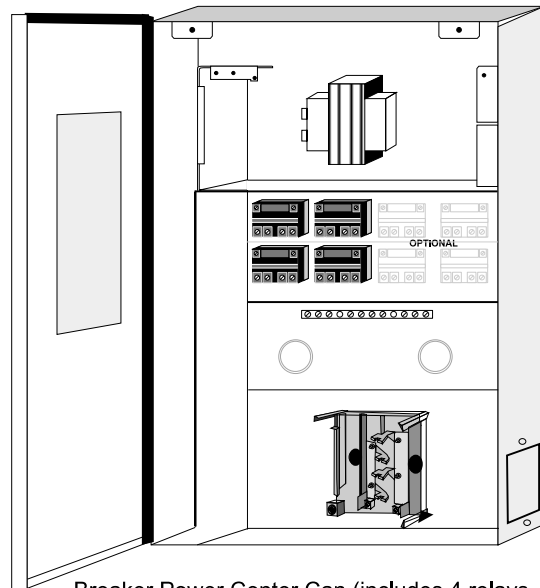
OPTIONAL

Breaker Power Center Can (includes 4 relays, breaker mounting plate, GFCI knockout)
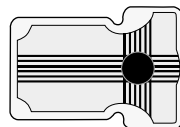
Additional JVAs
(for cleaners, water features)

Other Options:
• TeleLink*
• AquaLink PC (IBM remote)
• Additional Controllers and Remotes
• Breakers
• G.F.C.I.*
• Surge Protection*

*Not Available in CE Models

*Not Available in CE Models

Other Options

Specialty Boards

Auxiliary/JVA Relay Board

Transformer Socket

Relay Coil

TB3

J1

K1

TB1

TB2

J2

Transformer Connection

JVA Socket

Extra Relay Socket
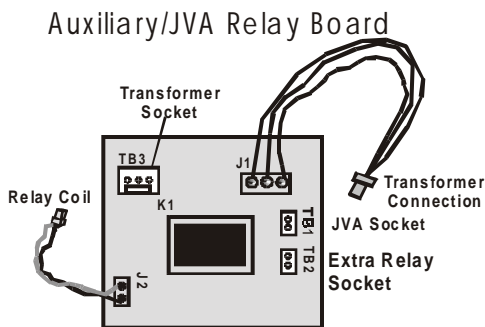
JVA Relay Aux Board is used to operate a JVA 2440 from any Auxiliary

JVA Relay Interlock Board

Filter Pump (Normally

Plug in JVA

P3
FILTER PUMP

P6
JVA

K1

P2

P4

P5

TB1

Normally

Normally Open

Plug into

Connect to
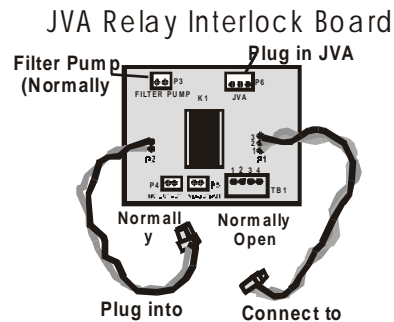
JVA Relay Interlock Board is used to turn off or on a piece of equipment as the system switches from pool to spa.

Dual Spa Side Switch Interface Board
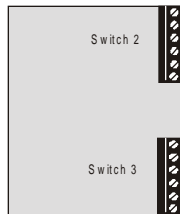
Switch 2

Switch 3

Required for use with two or more Spa Side Remotes.

Multiplex Board

J4 J3 J2 J1

Four Conductor Wire
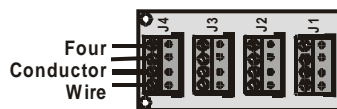
Multiplex Board is required when connecting more than 2 wires on a 4 pin Connector.

Light Dimming Relay

NEUTRAL LIGHT HOT 120 VAC HOT

Required for use when using a dimmer on a switched circuit.

Relay Splitter

K1

J2

TB1 **To Relay 1**

TB2 **To Relay 2**

Plug into Relay Socket
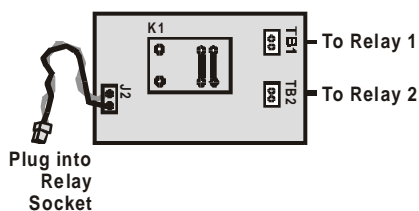
Relay Splitter is used to turn on two relays off one circuit.

Dual Equipment Heater Interface Board

Required for use with AquaLink RS2/6, 2/10, or 2/14 two heaters.

2-Speed Relay

NO NC COMMON
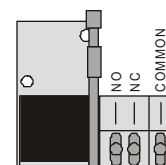
Required for use with two speed pumps.

TeleLink® Kit*

DIP Switches

PROGRAM # OF PUMPS
PROGRAM 600/6300 (1000)

RED
BLACK
YELLOW
GREEN

AquaLink RS®
TeleLink Board

Phone cable from wall jack
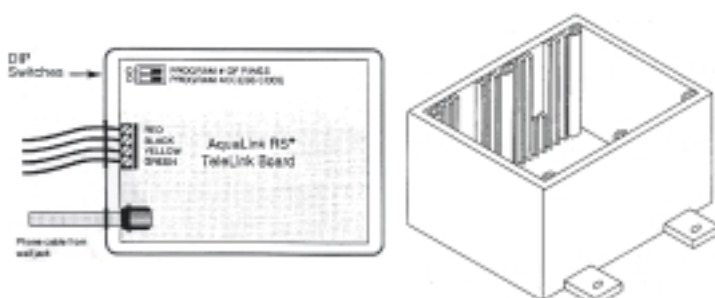
*Not Available in CE Models

Surge Protection Kit*

Assy # 6800

Assbly. # 6941
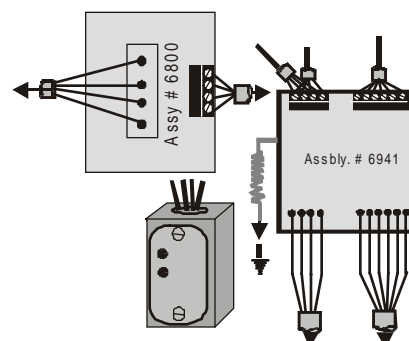
*Not Available in CE Models

Basic Plumbing

Plumbing for Pool and Spa Combination.

The diagram to the right shows a simplified version of a standard plumbing setup for a pool and spa that share the same filter pump, filter, and heater. The Intake and Return JVAs (Jandy Valve Actuators) turn simultaneously so when the Spa button is pressed on the AquaLink® RS Controller, water circulation switches between pool and spa. Consult the JVA Installation Manual to ensure that the Jandy Valve Actuators are "in synch" and rotate properly. Please also note that if you have a pool only or a spa only, the diagram does not apply, and if your pool and spa have separate sets of equipment, you should install an AquaLink® RS 2/6 model Controller, designed to control separate equipment sets.

Filter Pump

Filter

Heater

Pool Drain

Spa Make-up

Spa Drain

Check Valve

Pool Return

Spa Return

Vac Line

Skimmer
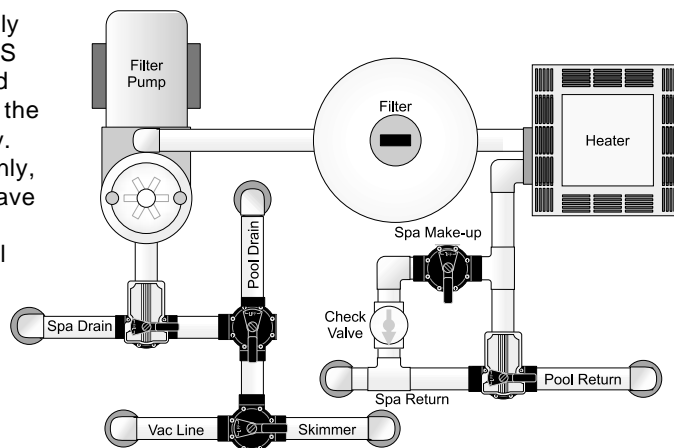
Non-Booster Pump Pressure-Side Pool Cleaner Plumbing.

The diagram to the right shows standard plumbing for a non-booster pump pressure-side pool cleaner (i.e., Ray-Vac, Energy Sweep, etc.) To control this cleaner, control water circulation to the cleaner by using a Cleaner JVA (see right). Plumb a three-port valve between the filter pump and the filter. Install a 2-port valve to open and close the cleaner line, and after the valve, install a Jandy Energy Filter to provide filtration (as the main filter has been bypassed). Mount a JVA on the 2-port valve and set the cam(s) (see JVA Manual) to turn 90º. Please note the installation of a non-booster pump pool cleaner requires moving DIP Switch #1 to the ON position.

Filter Pump

Filter

Heater

Cleaner Line

Spa Make-up

Energy Filter

Check Valve

Pool Return

Spa Return

Spa Intake

Pool Intake
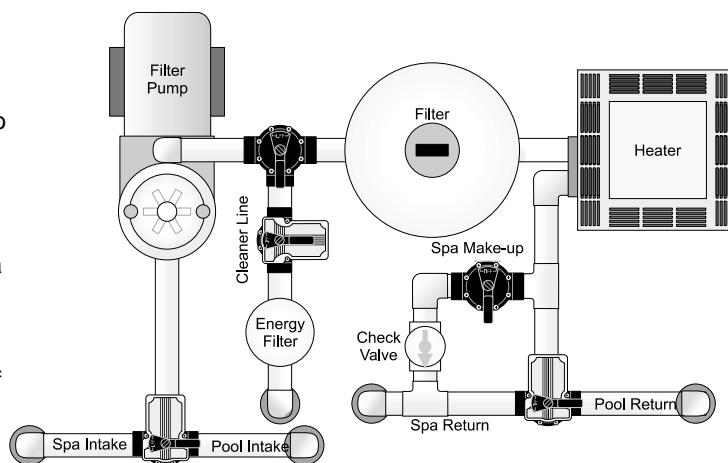
Booster Pump Pool Cleaner Plumbing.

If you are using a Booster Pump Pool cleaner, plumb the booster pump so its suction side is connected to the pool return after the heater and as close to the ground as is practical (see diagram to the right). Please note that the installation of a booster pump pool cleaner requires moving DIP Switch #1 to the ON position.

Filter
Pump

Filter

Heater

Spa Make-up

Booster
Pump

Check
Valve

Spa Intake   Pool Intake

Spa Return   Pool Return
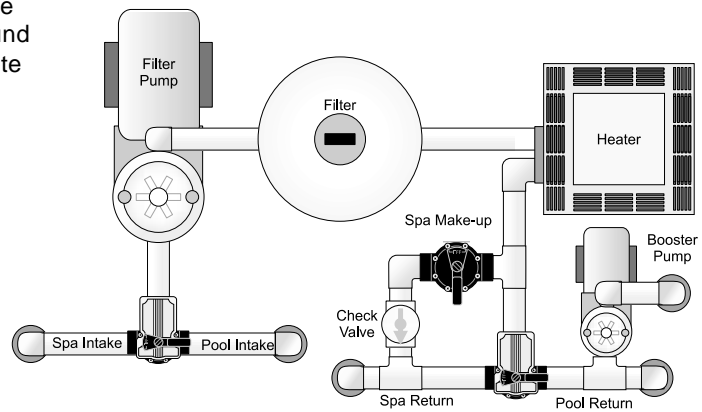
Solar System Plumbing.

If a solar system is part of the equipment, plumb the solar feed and return lines between the main filter and the heater (see diagram to the right). Please be sure to make provision for solar drain down. Use a Jandy Non-Positive Seal Valve to provide drain down. Plumb in a solar booster pump if needed.

NOTE: A Jandy (10K) Solar Sensor will be needed for solar system control. The sensor should be located near the solar panels and connected to the Power Center by 18 AWG wire.

If a solar booster pump is installed, follow the wiring diagram on page 34 for more information.

Filter
Pump

Filter

To Solar

From Solar

Heater

Spa Make-up

Check
Valve

Spa Intake   Pool Intake

Spa Return   Pool Return
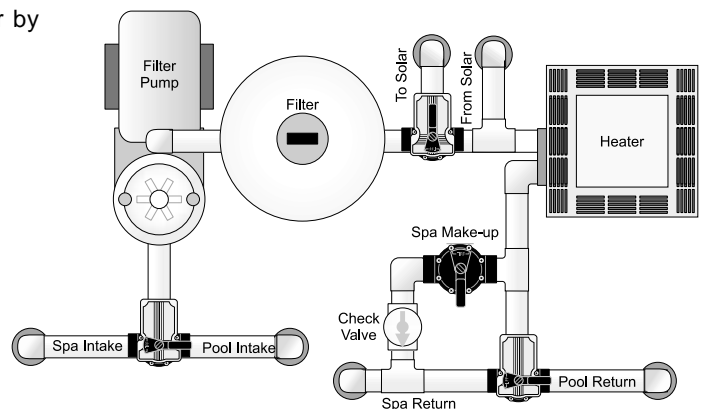
Mount Power Center.

All electrical equipment, except for the Four Function Switch, must be five feet or more from pool /spa and comply with all national, state and local codes. If using a Jandy Power Center without built-in breaker compartment, install electrical supply panel with separate breakers for each load. Make sure that motors on equipment have built-in thermal protection. Use the grounding terminal, provided within the Power Center, for grounding. Bond all equipment, including the Power Center, to earth ground. (Install to provide drainage for all electrical components.) Mount no less than 5 feet from pool/spa and at least 5 feet off the ground. **In areas where lightning strikes are common**, install an external surge suppression device.

Run Conduit/Wire from Supply Panel.

Depending on the amount of equipment you want to control, run ¾" or larger conduit from the power supply panel to the lower side of the Power Center. If you are using the Power Center with built-in breaker compartment, wire power to the appropriate breakers. Pull in appropriate wire for equipment. Each piece of equipment requires its own high voltage relay. Connect 120 volts to the power supply terminals. Connect equipment ground(s).

Wire Relay (install additional relays if needed).

For each piece of 240 volt equipment to be controlled, **wire line power to the two line terminals** of a Relay and **wire equipment to the two load terminals**. For each piece of 120 volt equipment, wire power to a line terminal and the equipment to a load terminal. Order and install optional relay modules if additional equipment is to be installed. Wire all relays and feed the relay plugs through the holes into low voltage compartment. **Plug in relay coils using the wiring diagram on page 34 as a guide.**

Special Relays.

If you have a two-speed pump, you must order and install a two-speed relay. If you wish to install light dimming, you must order and install a light dimming relay.

Contact Ratings: Do not exceed any rating.

- Standard Relay
    - 3 H.P. at 240 VAC
    - 1 ½ H.P. at 120 VAC
    - 25 Amps
    - 1500 Watts
- Two Speed
    - 2 H.P. at 240 VAC
    - 1 H.P. at 120 VAC
    - 20 Amps
        - Light Dimming (12 VAC and 120 VAC)
            - 1000 Watts incandescent

Low voltage raceway (do not run high voltage in this compartment)

24 VAC SECONDARY

PRIMARY

Filter Pump Relay

Aux. 3 Relay

Optional

Optional

Optional

Optional

Line 1

Load 1

Line 2

Load 2

Wire Nut to
120 VAC Power

Filter Pump
(240 VAC)

Blower
(120 VAC)

Breakers

Neutral

Ground

9

*This diagram shows wiring for a standard relay. For light dimming or two-speed operation, follow wiring instructions included with those relays.
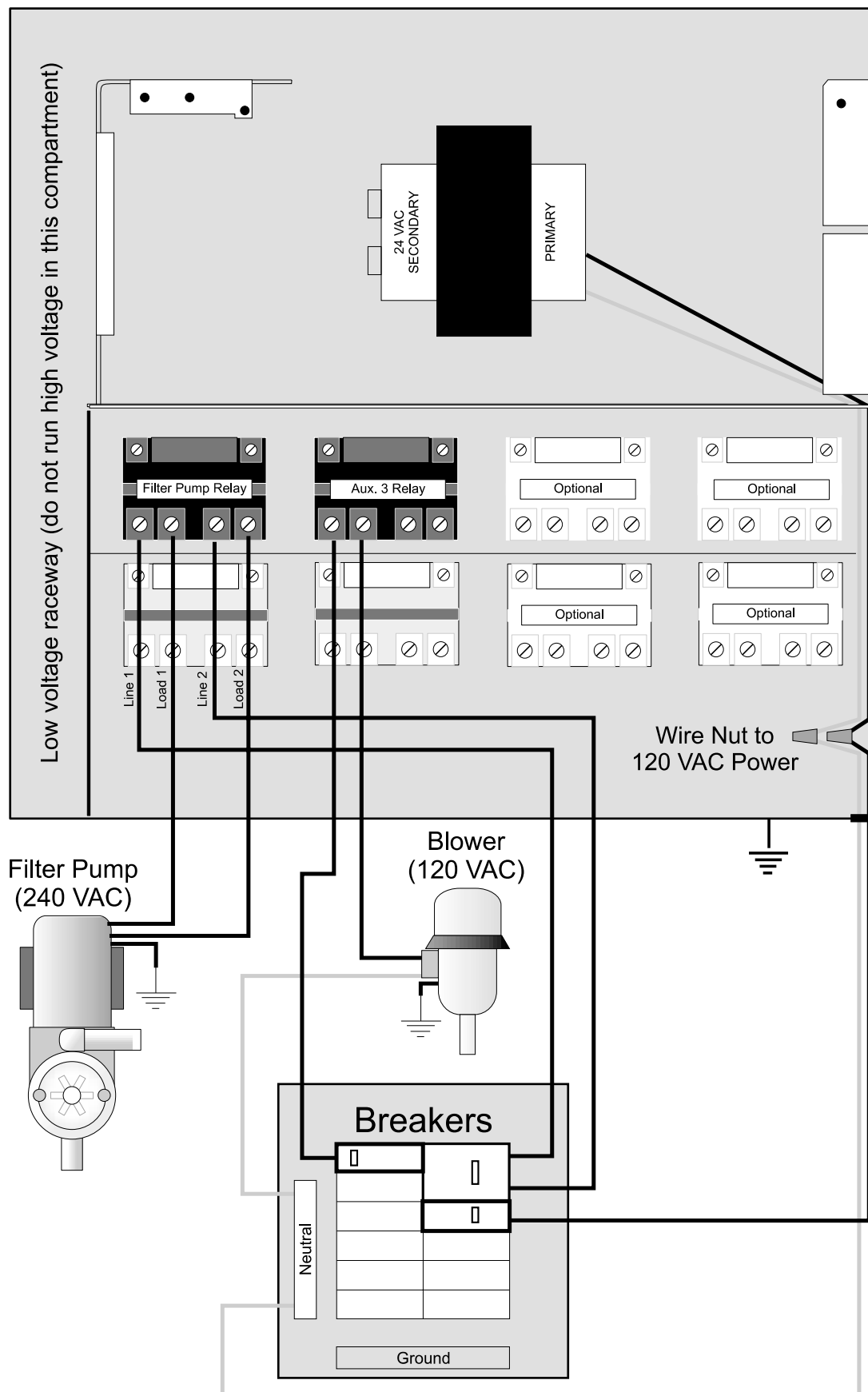
Low Voltage Wiring (Power Center P.C. Board)

AquaLink **RS**

OR

JANDY AquaLink RS

01/31/00 MON
6:00 PM

FILTER PUMP OFF
AIR 79°

EQUIPMENT ON/OFF
ONETOUCH ON/OFF
MENU / HELP

SELECT

J4
J3
J2
J1

STEP THREE

STEP FOUR

1
4 • 2
3

STEP ONE

STEP NINE

IMPORTANT:
Plug in Orange 3-pin connector from Transformer to Bezel before Mounting.

OPTIONAL

STEP EIGHT

STEP EIGHT

STEP SEVEN

STEP SEVEN

Filter Pump

STEP FIVE

Filter

STEP SIX

Heater

STEP TWO

STEP TWO

STEP FIVE

Air

Intake JVA

Return JVA

Solar

STEP FIVE

If connecting more than 2 items to the RS Power Center red 4 pin terminal bar, a multiplex PCB is required.

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1. Connect 24V AC Power to Bezel and Mount Bezel.

    Plug the orange 24V AC power plug from the transformer into its 3-pin terminal on the back of the Low Voltage Bezel, feed battery wires to front right and connect the Bezel to the Power Center with the screws provided. **DO NOT INSTALL BATTERY**.

2. Mount JVAs & run wires to Power Center.

    Refer to the JVA manual to install JVAs. Run JVA wires back to the low voltage compartment of the Power Center, through low voltage raceway, and plug the JVAs into their sockets. Make certain to plug Intake JVA into Intake socket, and Return JVA into Return Socket (see diagram). **NOTE: Do not coil JVA cable** inside Power Center. To shorten cable, remove JVA lid and undo cable wire nuts. Shorten, strip, and reconnect.

3. Connect Controller Cable to P. C. Board.

    Make provision for Cable to be run between the Control Panel and the Power Center. Where cable runs underground or in concrete, it must be run in conduit. **Never run high voltage and low voltage cable in the same conduit.** Pull Controller Cable into low voltage compartment. Strip back cable jacket 6". Strip each wire ¼" and connect to the red 4-pin connector. Wire according to the Power Center P.C. Board Wiring Diagram. A Multiplex Kit may be required if connectong more than two wires to a 4-pin connector.

4. Install Spa Side Switch or SpaLink RS and connect to Terminals.

    Spa Side Switch or SpaLink RS (optional)

    Follow the instructions included with the Spa Side Switch or SpaLink RS to mount and wire.

    NOTE: If more than one Spa Side Switch will be installed, an additional interface board is required, Dual Spa Side Switch kit, Part No. 6588. For the SpaLink RS, a Rev. G or newer PPD is required and if more than one SpaLink will be installed, a Multiplex Kit is required.

    Radio Remote, and TeleLink Telephone Interface

    To install, follow the instructions included with these optional items.

5. Connect Sensors to Terminals.

    Water Temperature Sensor.

    Drill 3/8" hole in pipe between filter pump and filter. Insert sensor and use clamp (provided) to hold in place. Remove the 10-pin terminal bar (green) from the PCB. Connect sensor wires to the 10-pin terminal bar as shown on the wiring diagram on page 34.

    Freeze/Ambient Air Temperature Sensor (required). Air Sensor must be installed.

    Install sensor outdoors where it will be subjected to shaded air temperature (not in sun). Connect sensor wires to the 10-pin terminal bar as shown on the wiring diagram. Connect other sensors to 10-pin terminal bar as shown on wiring diagram.

    Solar Temperature Sensor (optional)

    Install sensor adjacent to solar panels. Connect sensor wires to the 10-pin terminal bar as shown on the wiring diagram. Connect other sensors to 10-pin terminal bar as shown on wiring diagram. **NOTE:** If a solar sensor is not installed, the solar button can be labeled and used as an auxiliary.

6. Connect heater to Low Voltage Terminal.

    (All gas heaters or heat pumps with thermostatic circuitry of 24V AC or less)

    a. If you are connecting a Low Voltage heater, connect two 18-gauge wires, designed for use in hot environments, to the proper terminals on the 10-pin terminal bar. If you are connecting a High Voltage heater (not electronic ignition), you must instead connect the heater to a high voltage relay on the Power Center.

    b. Bring the 2 heater wires from the P.C. Board over to the heater and wire nut in series with heater circuitry as if you were wiring a fireman's switch or a heater delay.

    c. Turn the heater thermostat to maximum.

    d. Turn heater toggle switch on.

    e. Do not disconnect high limit or pressure switches.

    NOTE: For connection to specific heater brands, please see the Heater Connection Installation Guidelines.

    For Laars LX Heater (If the AquaLink RS has Rev. "I" or higher the LX must have a microprocessor with Rev. "C-10" or higher)

    a. Remove LX GUI from the heater and turn the GUI over.

    b. Run 4 conductor cable (red, black yellow, green) from the LX GUI red 4 pin terminal bar to the RS Power Center red 4 pin terminal bar.

    c. If connecting more than 2 items to the RS Power Center red 4 pin terminal bar, a Multiplex Kit is required.

    d. Replace the LX GUI on the heater.

7. Connect All Equipment to P.C. Board.

    Connect the high voltage relay plugs into their appropriate sockets according to the wiring diagram located on the inside of the Power Center door or on page 34 of this manual.

8. Set DIP Switches.

    See page 14 to set DIP Switches for optional operation features.

9. Turn on power to system, then connect 9-volt battery. (Do not connect battery if power is not supplied to unit).

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10. Install Power Center Faceplate.

    Use the screws provided to install and secure the Power Center Faceplate on to the Power Center.

Auxiliary Power Center Installation

You may have up to four (4) power centers on one (1) AquaLink RS system.

The four conductor RS485 cable going to the 4-pin (red) terminal bar on the auxiliary power centers can be wired either from the main power center, the indoor control panel or an optional accessory.

The auxiliary power centers can be located anywhere on the property, depending upon convenience and what devices are being controlled.

AUX B1 through B8, C1 through C8, and D1 through D8 on the indoor control panel operates the relays located in the auxiliary power centers. AUX B1 through B4 JVA sockets are energized when AUX B1 through B4 relay sockets are energized.

Note: If you are installing more than one accessory board, order and use a Jandy Multiplex Kit (p/n 6584). Never put more than two wires into each of the pins of the terminal bar. Use the multiplex board whenever more than two of the 4-wire cabes are being joined.

Mounting Screw Holes.

Mounting Bracket

Controller Cable Access Hole.
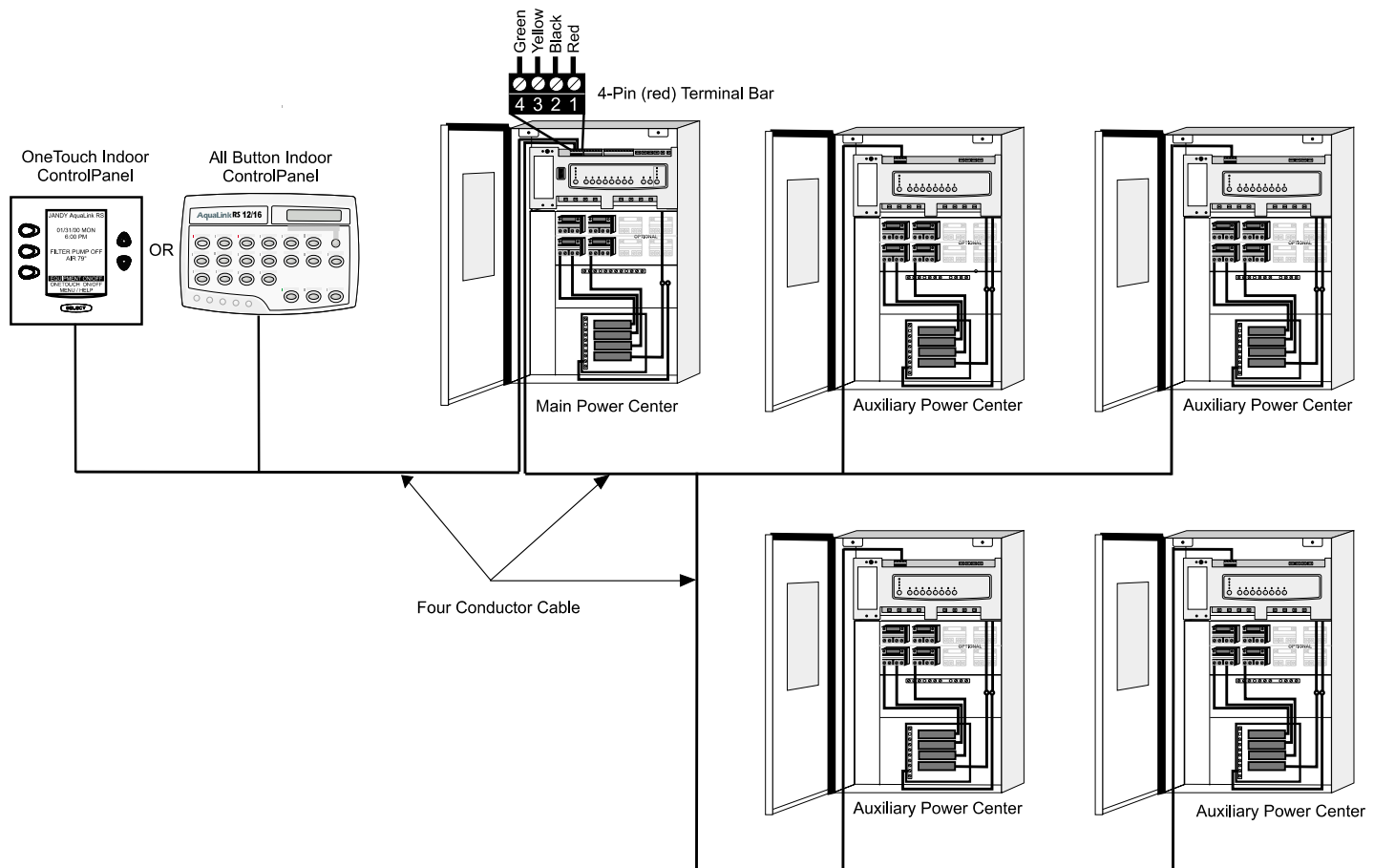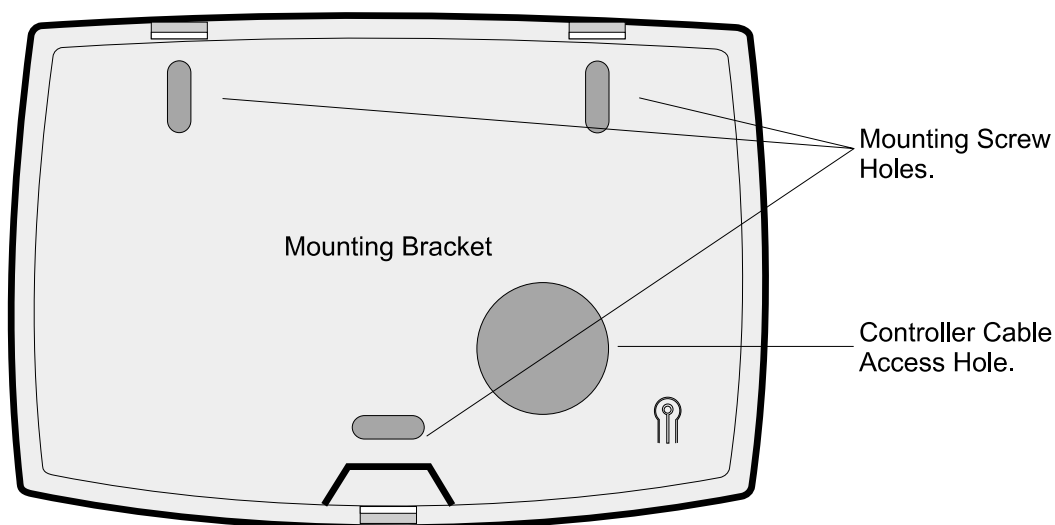
Prepare Control Panel Site.

With the aid of the homeowner, find the best location for the Control Panel. To ensure the Control Panel is level, hold the Mounting Bracket against the wall and mark the top inside of the upper right screw hole. Using this mark as a guide, place a level against the mounting wall and draw a horizontal line 4¼ inches to the left. Now use the Bracket as a template to mark holes for mounting screws (lining up the holes to the horizontal line). Drill ¼" holes for each screw and insert plastic anchors. Mount Bracket and secure in place.

Connect Control Panel Cable to Control Panel.

Pull Control Panel Cable through the hole in the Mounting Bracket. Strip back cable jacket 6". Remove the terminal bar from the Control Panel P.C. Board, and wire Control Panel cable according to the wiring diagram on the back of this manual. Connect the terminal bar to the Control Panel. Mount the Control Panel by putting the top in place first, then swinging the bottom in until the snap catches.

Cancel Delay

W2
W1
Multiple Control Panels

Green Yellow Black Red

4 3 2 1
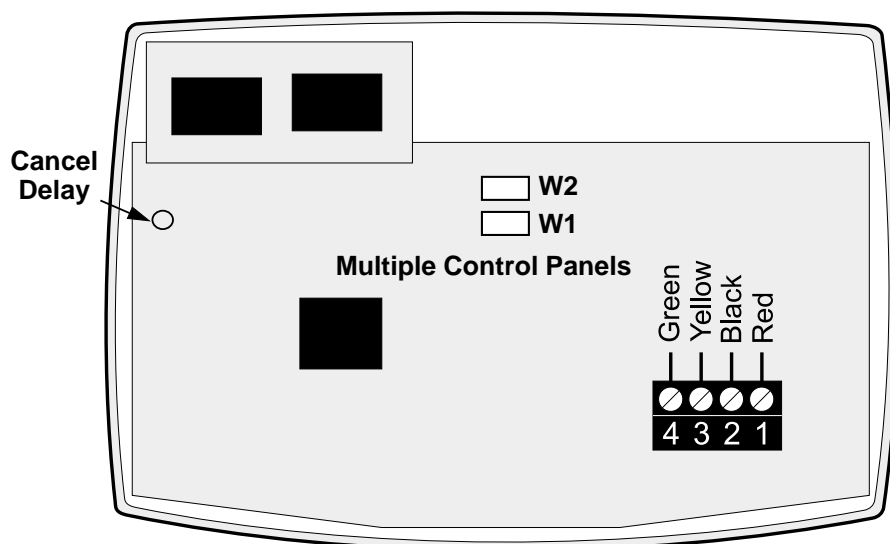
NOTE: If you are installing multiple Indoor Control Panels, you must "address" each one differently. Refer to instructions on following page for additional Control Panel(s).

Control Panel (Back View)
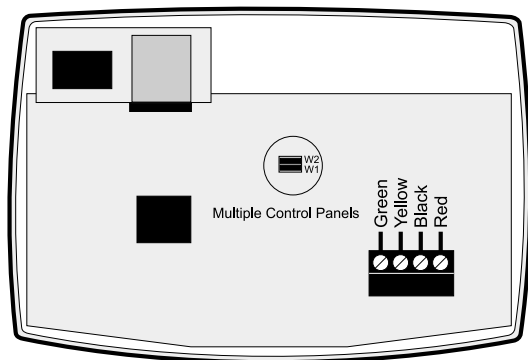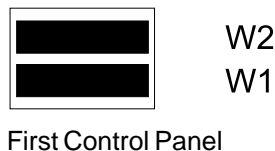
All Button Control Panel

Multiple Control Panels

Green Yellow Black Red

W2
W1

First Control Panel

W2
W1

Second Control Panel

W2
W1

Third Control Panel

W2
W1

Fourth Control Panel

Jumpers

W2
W1

Micro Processor

OneTouch Control Panel

Red 4 pin connector
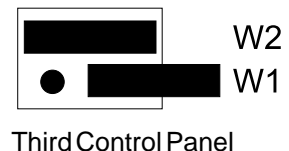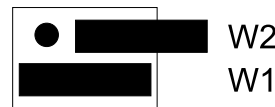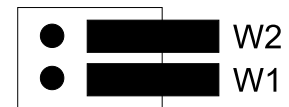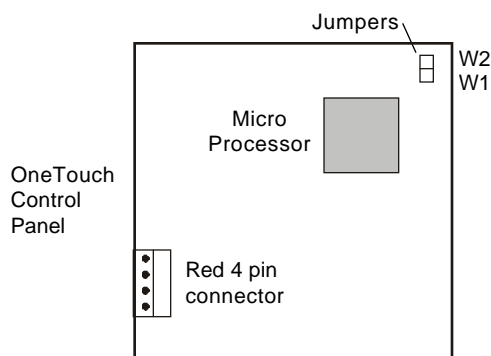
AquaLink RS Control Panel Jumper Setting: Move these jumpers only when installing more than one Control Panel on a system. The jumpers are used to give each Control Panel a unique system address. If you are using this Control Panel to replace an existing one, ensure the jumper settings match those on the one being replaced.

The AquaLink RS allows each system to support a maximum of four Indoor Control Panels. The Control Panels may be wired "In Series", starting from the first Control Panel (solid line), or each may be wired individually from the AquaLink Power Center (dotted line), or a combination of the two. To accomplish the "In Series" wiring scheme, you may "double-up" wires in the red terminal bars, but never put more than two wires into each pin of the terminal bars. If you need to join more than two of the 4-wire cables, order and install Jandy Part # 6584 (Multiplex PCB Kit).

OR

OR

OR

DIP Switch Settings

OFF ON
1
2
3
4
5
6
7
8

Use a pen or small tip screwdriver to slide switch to the right to turn on.
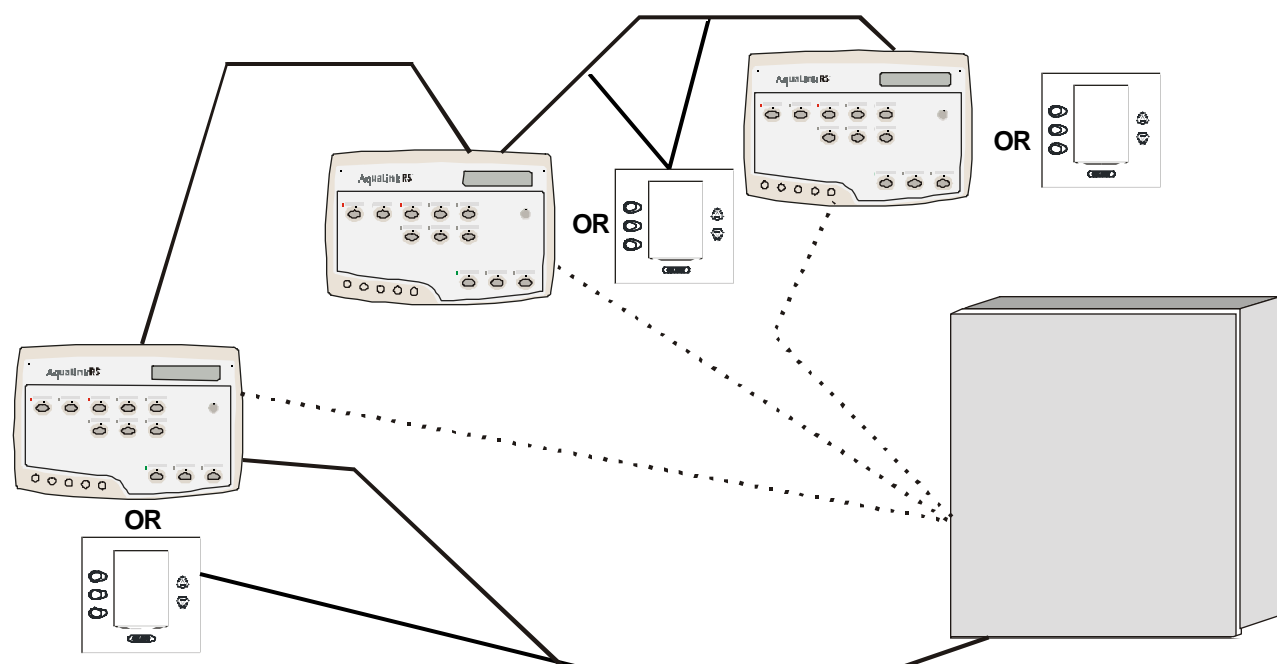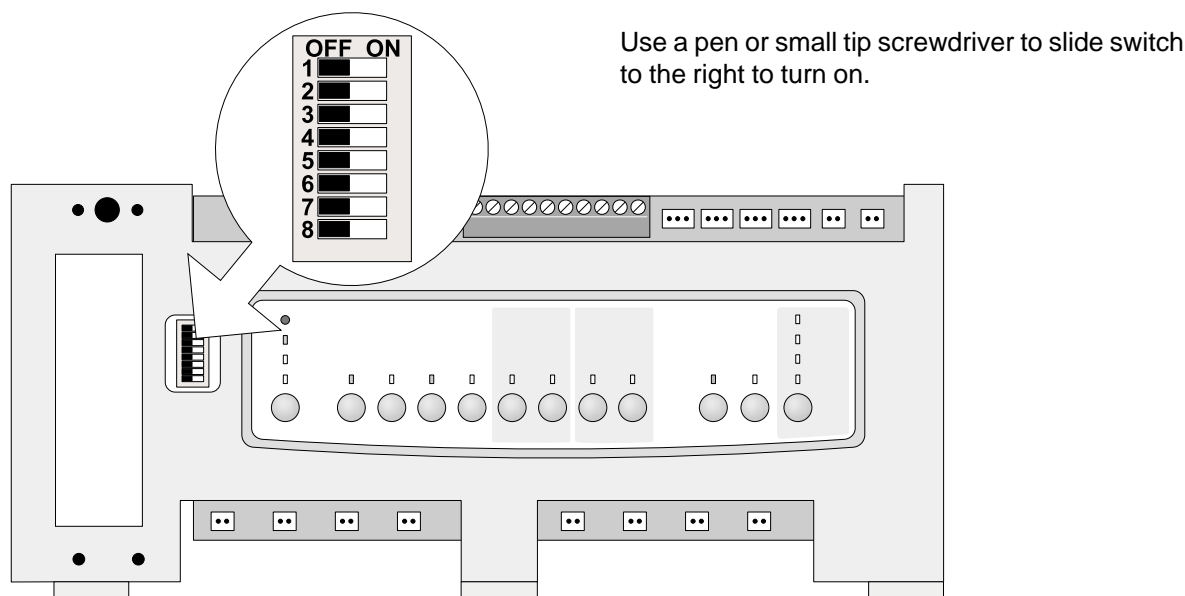
DIP #1 ON - *AUX 1 CONTROLS POOL CLEANER:*

If you installed a booster pump for a pool cleaner, the relay coil for the booster pump must be plugged into the AUX 1 relay socket. If a non-booster pump cleaner is installed, plug the JVA into the cleaner JVA socket. Turn on DIP Switch #1.
- Main filter pump turns on whenever cleaner turns on.
- Cleaner will not turn on until filter pump has been on for 3 minutes (to ensure priming of system).
- Cleaner turns off when water circulation is to spa.
- Cleaner turns off when spa overflow feature is activated.
- Cleaner turns off for 3 minutes when solar is activated (to ensure air is purged from system).
- AquaLink RS Controller Display reads "CLEANER" rather than "AUX 1".

DIP #2 ON - *AUX 2 CONTROLS LOW SPEED OF FILTER PUMP:*

Turn this switch on if you want to control both speeds of a two-speed filter pump. With this switch on, the filter pump button on the AquaLink RS Controller will control high speed and the AUX 2 button will control low speed. **IMPORTANT**: You must also install a Jandy Two-Speed Relay, purchased separately. Install the Relay according to its installation instructions.

DIP #3 ON - *AUX 3 CONTROLS SPA SPILLOVER (OPERATES WITH POOL/SPA COMBINATION UNITS):*

Turn this switch on, and when the AUX 3 button on the AquaLink RS Controller (or Spa Side Switch) is pressed, the Return Valve Actuator will rotate to spa circulation. Because the Intake Valve Actuator does not rotate, the spa will fill with water and overflow into the pool. **NOTE**: Leave AUX 3 relay socket empty.

DIP #4 ON - *HEATER COOL DOWN DISABLED:*

Turn this switch on to disable the heater cool down safety feature on the AquaLink RS. **WARNING:** Turn this DIP Switch on only if you are using an electric heater or heat pump that does not retain residual heat. If you are turning this switch on for service purposes, be sure to turn it back off after you have finished.

DIP #5 OFF - FACTORY USE ONLY:

This switch is used for calibration by Jandy technicians only, and to momentarily display the solar temperature. Please leave this switch in the off position.

DIP # 6 ON - Change Spare AUX. to active when Filter Pump is on and system is in spa mode (pool/spa combination units only).

DIP #7 - *NOT USED.*

DIP #8 ON - *HEAT PUMP INSTEAD OF GAS HEATER:*

Turn this switch on if you have installed a heat pump instead of a gas heater.

OneTouch Control Panel Installation

This document gives instructions for installing the Jandy AquaLink® RS OneTouch Indoor Control Panel (surface and flush mount). The instructions must be followed exactly. Read through the instructions completely before starting the procedure.

A. Installing the Flush Mount Control Box

1. Determine the location of the controller. Be sure there is nothing behind the sheetrock where the controller will be mounted.

2. Place Template 1 in the location chosen for the control panel, cut a square in the sheetrock. Be careful to cut accurately with a razor knife or equivalent. **Do not make the square oversized.**

3. Run the 4 conductor wire, and pull it through the hole in the wall.

5. Pull the 4 conductor wire through the large hole in the flush mount box. Then push the box into the wall.

6. Depending on what size sheet rock (5/8" or 1/2") determine which side of the cleat to be used.

   a. For 1/2" sheet rock face the large side of the cleat towards you (see Fig. 2).

   b. For 5/8" sheet rock, face the small side of the cleat towards you (see Fig. 2).

Figure 2.   Cleat Orientation

7. Insert a screw through the screw boss. Put a cleat into the top "U" shaped hole (with the orientation determined in Step 4). Thread the screw into the cleat. Hand tighten with a Phillips screwdriver. Repeat with second screw and cleat using the bottom hole. (see Fig. 3 & 4).
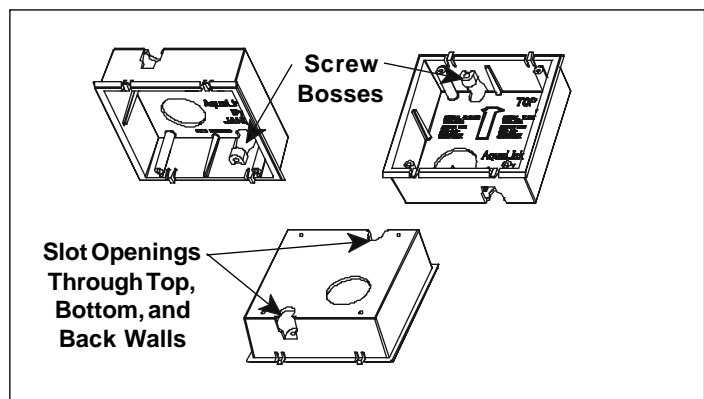
Figure 3.   Cleat Location

Figure 1.   Flush Mount Box Positioned in Sheetrock

Figure 4.   Cleat Location

Figure 5. AquaLink RS One Touch (surface and flush mount) Assembly

8. Place the PCB w/LCD and buttons back into the box. Be sure the rubber washer is between the screw head and the PCB. Hand tighten the screws. Snap the cover over the box.

B. Installing the Surface Mount Control Box

1. Determine the location of the controller. Be sure there is nothing behind the sheetrock where the controller will be mounted.

2. Place Template 2 in the location chosen for the controller, mark the holes for drilling. Drill the holes to fit the sheet rock anchors (recommended drill bit size is 3/16"). Install the sheet rock anchors. Drill the 1¼" hole for the 4 conductor wire.

3. Pull the 4 conductor wire through the 1¼" hole in the surface mount box. Mount the box to the wall using the screws provided with the product.

4. Place the PCB w/LCD and buttons back into the box. Be sure the rubber washer is between the screw head and the PCB. Hand tighten the screws. Snap the cover over the box.

5. Figure 6 shows the locations of the Cancel Button and the Reset Button on the OneTouch PCB.
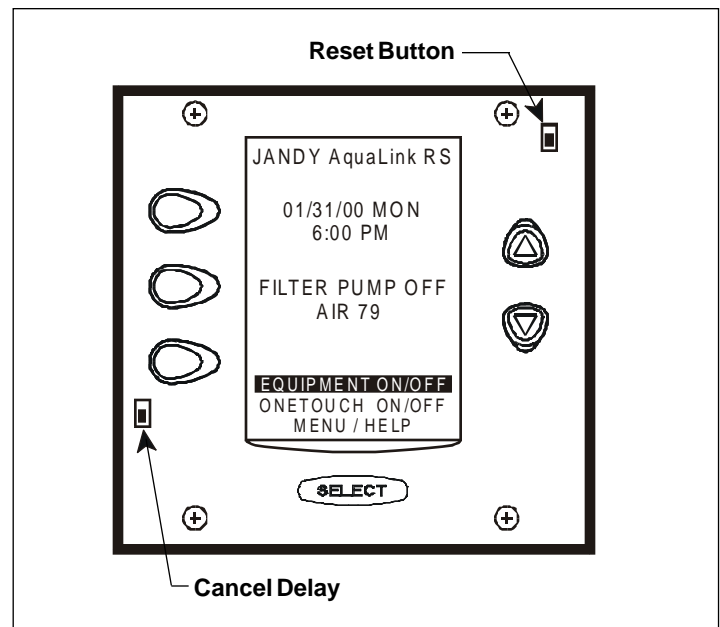
Figure 6. Location, Cancel Delay and Reset Buttons

Template 1- Flush Mount

4.03"

4.03"

WARNING
Do not cut
the sheetrock
any bigger than
the template.
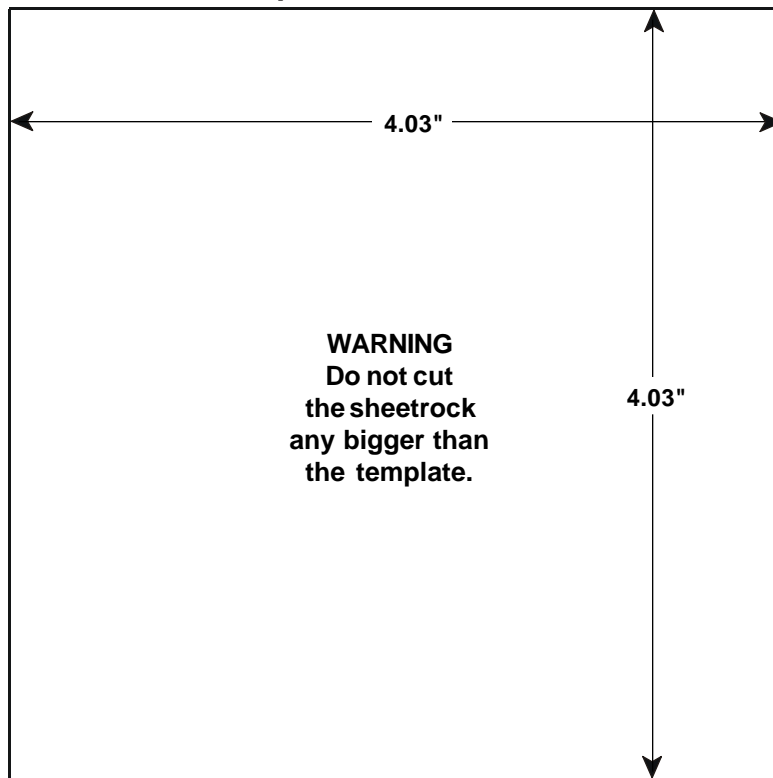
Figure 7. Flush Mount Template

Template 2- Surface Mount

Drill Thru 3/16"
(3) Places

Drill Thru 1¼"
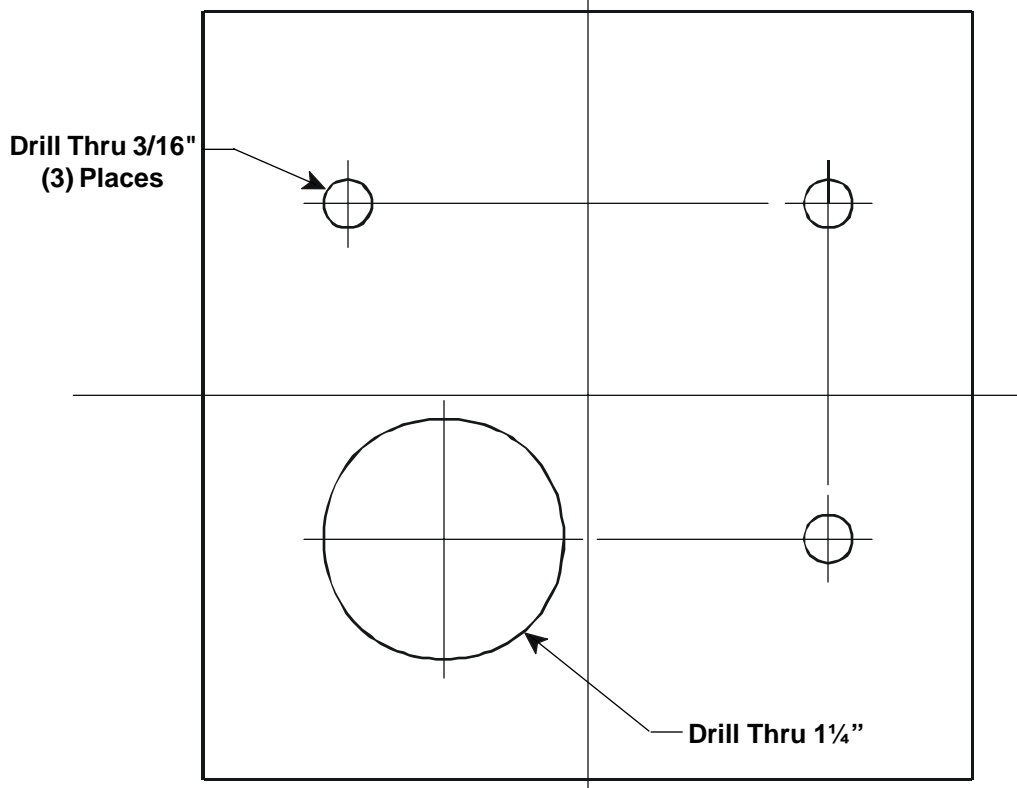
Figure 8. Surface Mount Template

All Button Control Panel Programming and System Defaults

Basic Programming.

To set a particular piece of equipment to turn on and off at predetermined timeS, press the MENU button, scroll to the PROGRAM MENU, press ENTER, and then press the button for the equipment that you want to program. The Controller Display will ask you to enter the day. Use the arrow keys **<—>*** to select, and press ENTER. The display will now ask you for the starting time and ending time. Repeat this process for each piece of equipment that you wish to program. You may enter as many programs as needed for each piece of equipment.
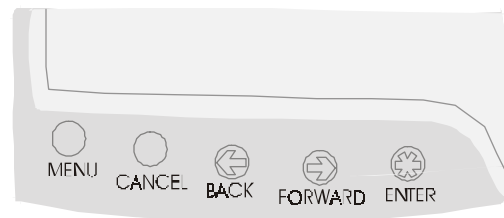
Set the Time.

To set the time, press the Menu button. Use the arrow keys to scroll to the SET TIME Menu and press ENTER. Now scroll to the correct year and month and press ENTER. Scroll to the correct hour and minute and press ENTER.

Depending on the age of the AquaLink RS, the following items can be found either in the Main Menu or in a Sub Menu under SETUP:

Set the Temperature.

Press the MENU button, scroll to the SET TEMP Menu item and press ENTER. Use the arrow keys to select POOL or SPA and again, press ENTER. Once you have selected which heater to set the temperature for, use the arrow keys to move to the desired temperature, and press ENTER, to complete.

Label Auxiliary Functions.

To label Auxiliary functions, press the MENU button. Scroll to SYSTEM SETUP and press ENTER, then scroll to the LABEL AUX Menu and press ENTER. Press the button to be labeled (example: AUX 1). Scroll to the desired label and press ENTER. Repeat for all functions.
NOTE 1: The labels "TIMED AUX", "AIR BLOWER", and "FILL LINE" are 30 minute timed circuits. **NOTE 2:** If DIP switch 1, 2 or 3 are on, Auxiliaries 1, 2 and 3 are labeled CLEANER, LOW SPEED and SPILLOVER respectively and cannot be relabeled.

Set Spa side Switch or SpaLink RS Functions.

The buttons on the Spa Side Switch or the SpaLink RS may be set to control any functions the home owner wishes. To the right is a list of default settings for the Switch. If you wish to change which functions the Switch(es) control, first press the MENU button. Scroll to SYSTEM SETUP and press ENTER, then scroll to FOUR FUNCTION SWITCH (SPA SWITCH on Rev. G or higher) or SPA LINK and press ENTER. Follow the prompts to assign each REMOTE button.

Set Freeze Protection.

AquaLink RS Freeze Protection senses when the air temperature falls below 38º F and automatically turns on the filter pump to circulate the water, thus preventing freezing of pipes. To add freeze protection to other equipment, press the MENU button. Scroll to SYSTEM SETUP and press ENTER, then scroll to FRZ PROTECT and press ENTER. Press the button for the equipment you want to protect.

Assign JVAs.

The Assign JVAs Menu lets you assign Jandy Valve Actuators (JVAs) to any auxiliary button. This means that whenever you press that auxiliary button, a valve turns. On pool/spa combination models, there are two JVA Valve Actuators that can be assigned to auxiliary buttons: the Cleaner JVA and the Solar JVA. On pool only/spa only models, there are four JVAs available. The AquaLink RS installer must set up these JVAs for this feature to operate correctly. Assigning JVAs lets the owner control certain features like diverting water to a waterfall or bank of spa jets.

Default Time

Default Time - 1:00 P.M.
Default Day - MONDAY
Default Date - 01/31/00

Default Temperature

Default Pool Temp - 80ºF.
Default Spa Temp - 102ºF.

Default Switch Setting

Button 1 - Spa (Filter Pump)*

Button 2 - Spa Heater (Temp1)*

Button 3 - AUX 1

Button 4 - AUX 2

* pool/spa only controls.

Default Freeze Protect. Settings

FILTER PUMP: Freeze Protection ON. ALL OTHER EQUIPMENT, Freeze Protection OFF.
NOTE: *If you select* SPA *to be freeze protected, water circulation will switch between pool and spa every 30 minutes during freezing conditions once freeze mode is active.*

How to assign values:

1. Press the MENU button. Use the FORWARD and BACK buttons to move to SYSTEM SETUP. Press ENTER. Use FORWARD button to move to ASSIGN JVAs Menu and press ENTER. The AquaLink RS display will read CLEANER JVA **<—>***. If both JVAs are being used, you will not be able to use this Menu.

2. Use the FORWARD and BACK arrows to choose among the JVA's listed. When the JVA you want to assign to an auxiliary is displayed, press ENTER.

3. The AquaLink RS display will read SELECT AUX TO ASSIGN JVA TO. Press the button of the Auxiliary that you want to activate the JVA.

Reviewing:

To review equipment, press the MENU button, then use the FORWARD arrow to scroll to the REVIEW menu. Press ENTER, use the arrows to scroll to the item you wish to review, and press ENTER again.

Canceling Items:

If you make a mistake in programming or you want to change, for example, the ON/OFF times for a specific device, you can cancel programs for that piece of equipment. For example, to CANCEL A DIMMER, press the CANCEL button; use the forward and back buttons to advance to DIMMERS and press ENTER. The AquaLink RS display will prompt to select an Aux. Press the button of the Auxiliary for which you want to cancel the dimmer.

If you want to cancel a JVA assignment, first press the CANCEL button (if no JVAs are assigned, you cannot use this function). Use the FORWARD and BACK arrows to advance to JVA ASSIGNS and press ENTER. The AquaLink RS display will read CLEANER JVA. Use the FORWARD and BACK arrows to toggle between JVAs to cancel. When the JVA assignment that you want to cancel is displayed, press ENTER. The AquaLink display will read PRESS ENTER TO CANCEL JVA ASSIGNMENT,
or CANCEL TO ABORT. Press ENTER to cancel the JVA assignment, or press CANCEL to abort.

Resetting the System:

To remove all labeling, programming, assignments, and temperature settings, press the MENU button, scroll to CLEAR MEMORY and press ENTER twice.

Power Center Service Switch:

AUTO Mode (automatic):

The Controller has complete control of all functions. All programmed settings will operate. All safety delays and equipment protection interlocks are operational.

SERVICE Mode:

The Power Center has complete control of all functions. Service Mode must be turned On/Off at the Power Center. No programmed settings will operate. **CAUTION:** In service mode, the safety interlocks for equipment protection are overridden.

TIMEOUT Mode:

The Power Center has complete control for 3 hours. After 3 hours, the system will return to Auto Mode. Programmed On/Off times will be overridden during the 3 hours. After the three hour "time-out", the system will resume any programmed times that were overridden.

Battery Back-Up:

A nine-volt battery is located at the Power Center. **Do not** install battery in the Power Center until system is ready to operate. Battery will drain if power is left off. Review DIAGNOSTICS in the SYSTEM SETUP section of the Menu. The DIAGNOSTICS will indicate when the battery needs replacement.

Light Dimmer:

Dimmers can be set at 25%, 50%, 75% or 100%, depending upon the amount of light desired, by pressing the AUX assigned as a dimmer and using the arrow **<—>*** buttons to dim or brighten. Once desired brightness is achieved, press ENTER. Press AUX to turn off.
NOTE: When light is turned back on, it will automatically return to brightness last set.

From the Spa Side Switch or SpaLink RS, light dimming operates as follows:

When a button assigned to a light dimming auxiliary is pressed, the light will turn on at full brightness, and each press of the button will decrease brightness 25% until light is off.

Special Note to "Start-up Person":

The AquaLink RS allows you two options for operating the pool equipment for the first day of operation:

Option #1 - Once all programming of equipment is completed, go to the Power Center Service Switch. Push the Switch three times which moves from "AUTO" to "SERVICE" to "TIME-OUT" and finally back to "AUTO". The AquaLink RS will now "look back" (review) all programs and turn on any equipment which is programmed to be on. Close up system; it will now operate as programmed.

Option #2 - If you want the filter pump or cleaner to operate continually for the first day, leave the Power Center Service Switch in "AUTO" mode. Go to the indoor controller and press the AUX buttons for the equipment you want to run. The equipment activated will now run continuously, ignoring the first programmed off time, and turn off at the programmed off time for the next day.

Basic Programming.

To set a particular piece of equipment to turn on and off at predetermined times, highlight EQUIPMENT ON/OFF and press select. To highlight an item, use the up or down buttons. Use the SELECT button to turn the equipment on or off. After turning a piece of equipment on, return to the main menu by using the back button. Repeat this process for each piece of equipment that you wish to program. You may enter as many programs as needed for each piece of equipment.

Set the Time.

To set the time, highlight MENU/HELP press select, highlight SET TIME and press select. Use the arrow keys to set values, press SELECT to continue.

The following items can be found either in the MENU/HELP or in a Sub Menu under SYSTEM SETUP:

Set the Temperature.

To set the pool and spa thermostats, highlight MENU/HELP press select, highlight SET TEMP and press select. Use the arrow keys to highlight either pool or spa and press select. Use the arrow keys to increase or decrease the temperature.

Label Auxiliary Functions.

To label Auxiliary functions, highlight MENU/HELP press select, highlight SYSTEM SETUP press select, highlight LABEL AUX and press select. You can choose a name from general, light or waterfall labels or enter a custom name by using the arrow keys to change letters and using the select key to move to the next letter.

Set Spa Side Switch or SpaLink RS Functions.

To set the Spa Side Switch or SpaLink RS, highlight MENU/HELP press select, highlight SYSTEM SETUP press select, highlight SPA SWITCH or SPA LINK and press select. Highlight the number of remotes you have and press select. Use the arrow keys to move the highlight bar to choose which button you are assigning, press select. Use the arrow keys to move the highlight bar to choose which piece of equipment will be associated with the button, press select. After pressing select on the piece of equipment, you will be returned one screen to continue assigning Spa Side Switch or SpaLink RS buttons.

Set Freeze Protection.

To set freeze protection, highlight MENU/HELP press select, highlight SYSTEM SETUP press select, highlight FREEZE PROTECT and press select. Use the arrow keys to change temperature. Once the temperature is set use the select button to move to the next screen to assign freeze protection to a selected piece of equipment. **Note:** the filter pump is always assigned to freeze protection.

Assign JVAs.

To assign JVA's, highlight MENU/HELP press select, highlight SYSTEM SETUP press select, highlight ASSIGN JVAs and press select. Highlight the JVA you wish to assign and press select.
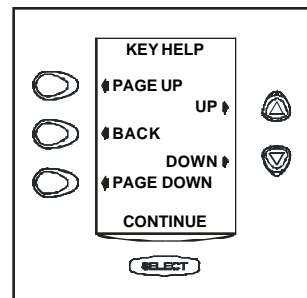
Default Time

Default Time - 1:00 P.M.
Default Day - MONDAY
Default Date - 01/31/00

Default Temperature

Default Pool Temp - 80ºF.
Default Spa Temp - 102ºF.

Default Freeze Protect. Settings

FILTER PUMP: Freeze Protection ON. ALL OTHER EQUIPMENT, Freeze Protection OFF.

NOTE: *If you select* SPA *to be freeze protected, water circulation will switch between pool and spa every 30 minutes during freezing conditions once freeze mode is active.*

Resetting the System:

To remove all labeling, programming, assignments, and temperature settings, highlight MENU/HELP press select, highlight SYSTEM SETUP press select, highlight CLEAR MEMORY and press select. Select CONTINUE, then select either yes or no to clear memory. There will be a 15 second delay before you see the FINISHED screen, select CONTINUE to return to SYSTEM SETUP.

Power Center Service Switch:

AUTO Mode (automatic):

The Controller has complete control of all functions. All programmed settings will operate. All safety delays and equipment protection interlocks are operational.

SERVICE Mode:

The Power Center has complete control of all functions. Service Mode must be turned On/Off at the Power Center. No programmed settings will operate. **CAUTION:** In service mode, the safety interlocks for equipment protection are overridden.

TIMEOUT Mode:

The Power Center has complete control for 3 hours. After 3 hours, the system will return to Auto Mode. Programmed On/Off times will be overridden during the 3 hours. After the three hour "time-out", the system will resume any programmed times
that were overridden.

Battery Back-Up:

A nine-volt battery is located at the Power Center. **Do not** install battery in the Power Center until system is ready to operate. Battery will drain if power is left off. Review DIAGNOSTICS in the SYSTEM SETUP section of the Menu. The DIAGNOSTICS will indicate when the battery needs replacement. The battery will keep the clock running during power outages.

Light Dimmer:

Dimmers can be set at 25%, 50%, 75% or 100%, depending upon the amount of light desired. Use the DIMMERS menu under SYSTEM SETUP to assign an auxiliary to be dimmed. **Note:** you must install a light dimming relay.

From the Spa Side Switch or SpaLink RS, light dimming operates as follows:

When a button assigned to a light dimming auxiliary is pressed, the light will turn on at full brightness, and each press of the button will decrease brightness 25% until light is off.

Special Note to "Start-up Person":

The AquaLink RS allows you two options for operating the pool equipment for the first day of operation:

Option #1 - Once all programming of equipment is completed, go to the Power Center Service Switch. Push the Switch three times which moves from "AUTO" to "SERVICE" to "TIME-OUT" and finally back to "AUTO". The AquaLink RS will now "look back" (review) all programs and turn on any equipment which is programmed to be on. Close up system; it will now operate as programmed.

Option #2 - If you want the filter pump or cleaner to operate continually for the first day, leave the Power Center Service Switch in "AUTO" mode. Go to the indoor control panel and highlight EQUIPMENT ON/OFF press select, then select the equipment you want to run. The equipment activated will now run continuously, ignoring the first programmed off time, and turn off at the programmed off time for the next day.

Four Function Spa Side Remote Provisions

The Four Function Spa Side Remote is a double insulated, submersible device which is ETL listed (to UL Standard 1563) for installation at the water's edge. It is typically installed at the tile-line of the spa wall, or in the deck within arm's reach of the spa. It can be used with a gunite spa, acrylic spa, or hot-tub.

When installing the Four Function Remote, it is important to make provisions for this hard-wired remote **before the pool/spa construction is complete** by running electrical conduit from the desired remote location to the future Power Center location. Do not install the Four Function Remote until construction of spa and deck is complete.

1. Install a 6" piece of 1½" or 1" schedule 40 PVC pipe in the pool/spa wall so that the Four Function Remote will not be constantly submerged. A 1½" to 1" adapter is included for use if 1½" PVC pipe is being used. This pipe will house the remote installed vertically in the wall of the pool or spa. Carefully trim the end of the pipe flush with the wall after all tile work is completed. There must be least 2" of clearance from coping stones or other raised objects to the schedule 40 pipe.

2. Install a ½" or ¾" reducer to the bottom of the 6" piece of pipe and run a ½" or ¾" electrical conduit underground from the reducer to the future AquaLink® RS Power Center location see page 10 of AquaLink® RS Installation Manual for further details on Power Center). Use sweep elbows (do not use 90° elbows) for turns so that you can easily pull the remote cable later.

3. Use a snake (or similar tool) to pull the Four Function Remote cable through the conduit to the Power Center.

4. At the Power Center, feed the remote cable into the low voltage compartment (left-hand side). Strip the cable jacket 4" and strip each wire ¼". Use the P.C. Board Wiring Diagram on the inside of the Power Center door to locate the Four Function Remote terminals. Wire the remote according to the diagram.

5. At the Remote mounting location, press (do not screw) the Four Function Remote into the PVC pipe. **NOTE:** Do not alter the Four Function Remote housing. Cutting the housing may damage its seal and will void the warranty.

When replacing an old, threaded body style remote with a new four function remote, place 1/8" bead of silicone sealant around base of remote and let cure. Add extra silicone sealant and install remote into threaded adapter.

6" of 1½" to 1" schedule 40 PVC pipe

1½" to 1" adapter (to fit into 1½" pipe)

½" to ¾" schedule 40 PVC conduit (to Power Center)

Edge of Pool/Spa

NOTE: Do not install Four Function Remote until construction of spa and deck is complete.

1 3/8" Diameter

Pool/Spa Tile

NOTE: For use with an AquaLink® RS System, <u>ONLY!</u> AquaLink RS software revision must be Rev. "G" or later.

For Vertical Installation into the Spa Wall:

Install a 6" piece of 1½" or 1" schedule 40 PVC pipe in the pool/spa wall so that the SpaLink RS Remote will not be constantly submerged. A 1½" to 1" adapter is included for use if 1½" PVC pipe is being used. This pipe will house the remote installed vertically in the wall of the pool or spa. Carefully trim the end of the pipe flush with the wall after all tile work is completed. There must be least 2" of clearance from coping stones or other raised objects to the schedule 40 pipe.

Install a reducer to the end of the 6" piece of pipe and run a ½" or ¾" electrical conduit underground from the reducer to the AquaLink RS Power Center location (see page 10 of the AquaLink RS Installation Manual for further details on the Power Center). Use sweep elbows for turns (do not use 90° Elbows) so that the SpaLink RS cable can be easily pulled through later.

Use a snake (or similar tool) to pull the SpaLink RS cable through the conduit to the Power Center. At the Power Center, feed the SpaLink RS cable into the low voltage compartment (left side). Strip the cable jacket 4" and strip each wire ¼". Use the P.C. Board Wiring Diagram on the inside of the Power Center door to piggyback (double-up) the SpaLink RS wires with the 4-pin terminal bar. See the Wiring Diagram on page 3 of these instructions.

Apply a silicone sealant around the edge of the cone-shaped base of the SpaLink RS and slide it into the adapter (if one is being used), then into the PVC. At the mounting location, press (do not screw) the SpaLink RS into the PVC. Place a 1/8" bead of silicone sealant around back of the SpaLink RS and let cure. **NOTE:** Do not alter the SpaLink RS housing. Cutting the housing may damage its seal and will void the warranty.

Dimensions:
Length: 6½"   w/frame: 7½"
Width: 2½"   w/frame: 3½"
Height: 1"   w/frame: 1"

NOTE: A bonding lug is provided with the SpaLink RS package. The RS Power Center must be both bonded and grounded.

1½" to 1" Adapter (to fit into 1½" PVC pipe)

Apply silicone sealant around the boss of the SpaLink before sliding it into the Adapter and PVC

1" or 1½" Schedule 40 PVC pipe

Apply 1/8" bead of silicone sealant around the edge of the SpaLink before sliding it into place

½" to ¾" schedule 40 PVC conduit (to Power Center)

Edge of Pool/Spa

Pool/Spa Tile Line

SpaLink RS Control
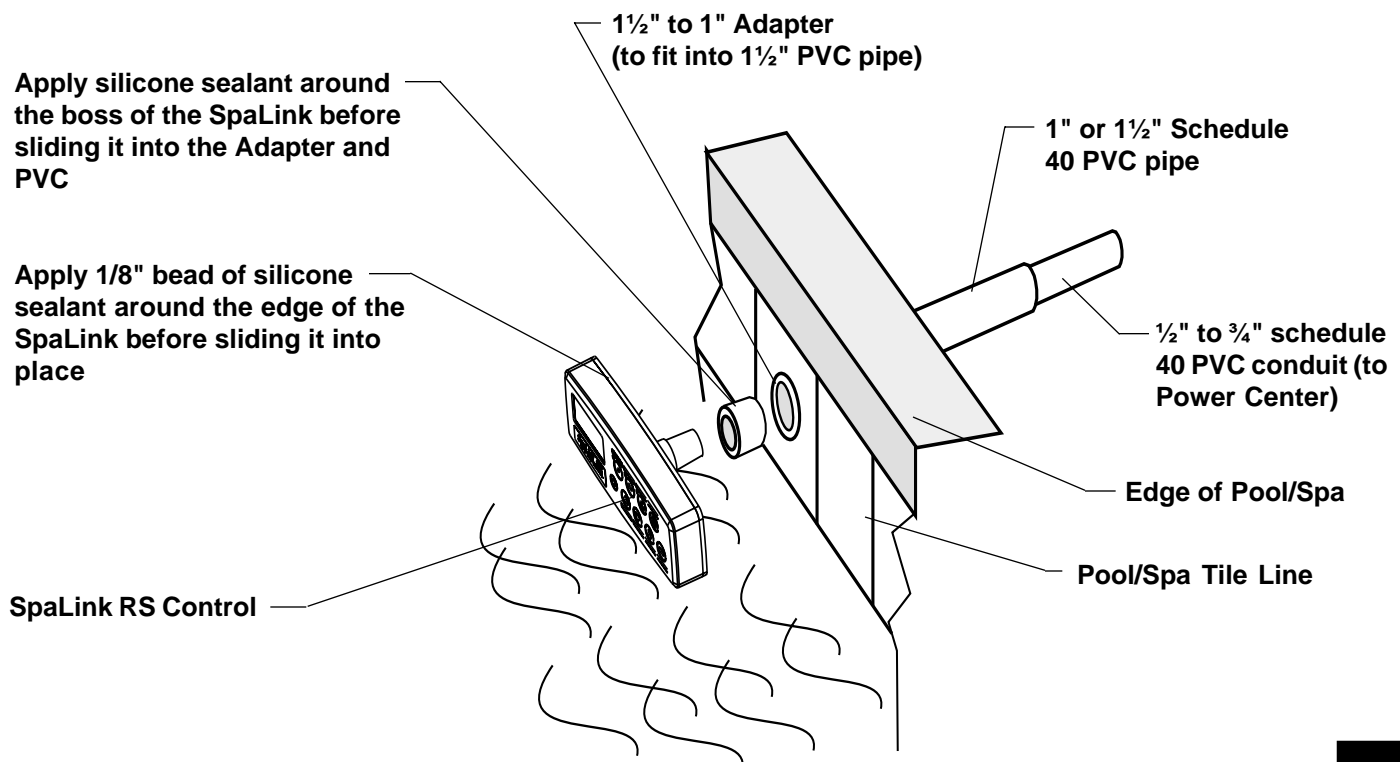
For Horizontal Installation into the Deck:

To house the SpaLink RS, plumb a 6" long piece of 1" schedule 40 PVC pipe. A 1½" to 1" adapter is included for use if 1½" PVC is being used. Carefully trim the end of the pipe flush with the deck after all the deck work is completed. Leave at least 2" of clearance around the conduit from coping stones or other raised objects.
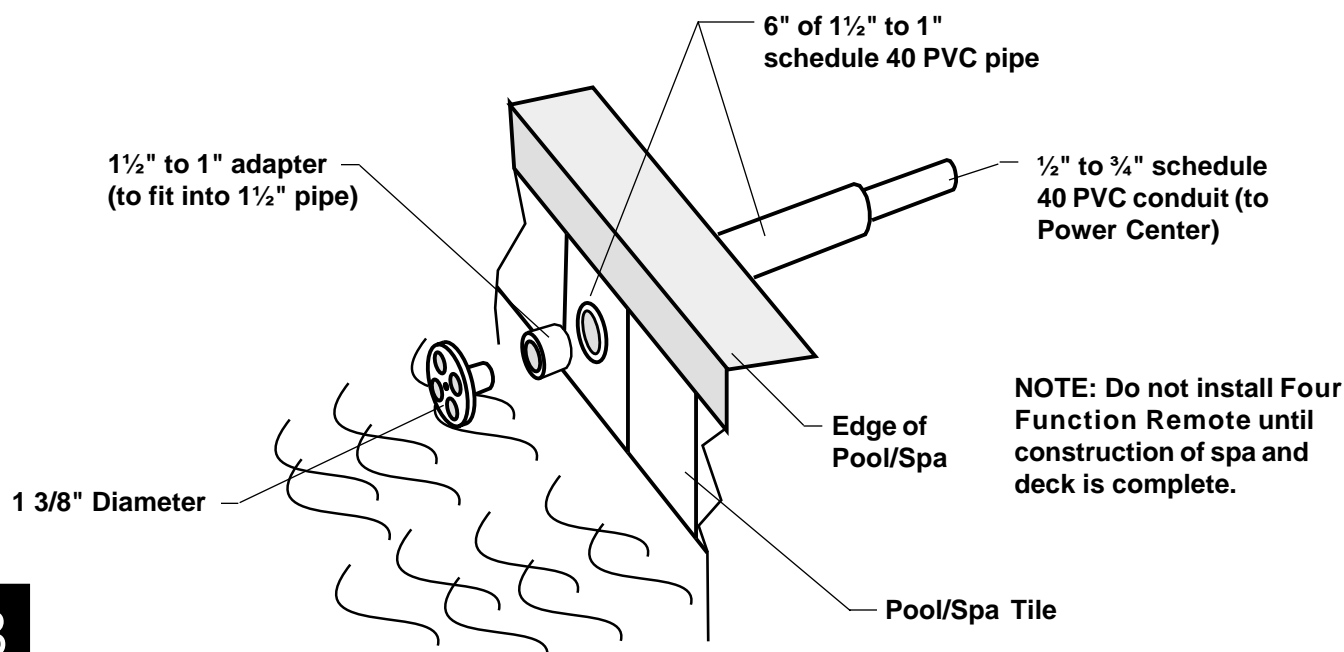
Install a reducer to the end of the 6" piece of pipe and run ½" or ¾" electrical conduit underground from the reducer to the AquaLink RS Power Center location (see page 10 of the AquaLink RS Installation Manual for further details on the Power Center). Use sweep elbows for turns so that the SpaLink RS cable can be easily pulled through later.

Use a snake (or similar tool) to pull the SpaLink RS cable through the conduit to the Power Center. At the Power Center, feed the SpaLink RS cable into the low voltage compartment (left-hand side). Strip the cable jacket 4" and strip each wire ¼". Use the P.C. Board Wiring Diagram on the inside of the Power Center door to piggyback (double-up) the SpaLink RS wires with the 4-pin terminal bar.

Apply a silicone sealant around the edge of the cone-shaped base of the SpaLink RS and slide it into the adapter (if one is being used), then into the PVC. At the mounting location, press (do not screw) the SpaLink RS into the PVC. Place a 1/8" bead of silicone sealant around back of SpaLink and let cure. **NOTE:** Do not alter the SpaLink RS housing. Cutting the housing may damage its seal and will void the warranty.

3¼"

1"

SpaLink Control

"O" rings

1½" to 1" Adapter (to fit in 1½" pipe)

1½"or 1" schedule 40 PVC pipe

Concrete Deck

½" or ¾" electrical conduit w/ sweep elbows for turns
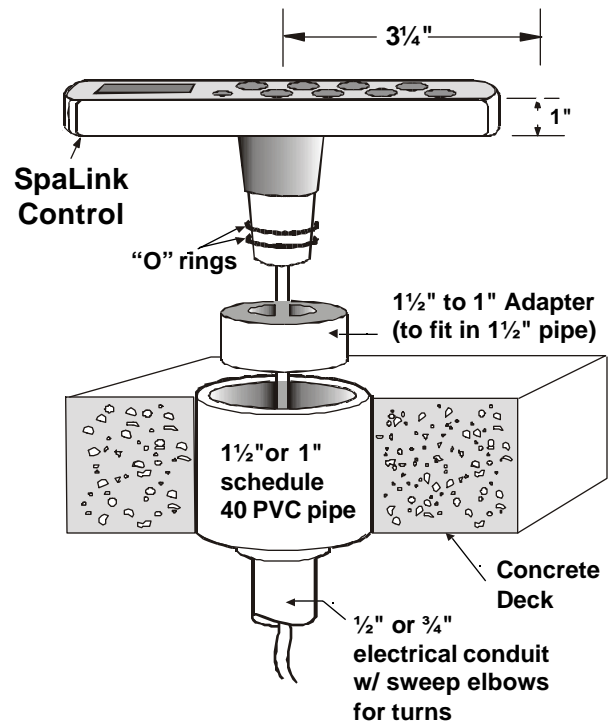
Mud Box Installation for Flush Mount SpaLink RS Remote.

If using the SpaLink RS Mud Box, it is important to make provisions for the hard-wired SpaLink® RS Control **before the pool/spa construction is complete** by running electrical conduit from the desired SpaLink location to the Power Center location. However, do not install the SpaLink until construction of spa and deck is complete.

1. **The mud box is for use with new SpaLink housing and frame only.** This mud box will not work with the old style SpaLink.
2. Use the dimensions below to make space for the mud box.
3. Install a one (1") inch PVC conduit from the Power Center to the back of the mud box, so that the SpaLink RS Remote will not be constantly submerged.
4. The mud box's fitting is smaller than one (1") inch to allow movement of the mud box within the PVC conduit. Use caulking or RTV to make up for the loose fit.
5. The smaller outlet on the mud box is for water drainage (if needed).
   a. Cut the end of the nipple and run a piece of tubing to the nipple.
   b. Run a piece of tubing to an appropriate spot away from the mud box.
6. Place the SpaLink w/frame and "O" rings into mud box. The SpaLink is smaller than the mub box to allow movement if the mud box is not level. Use silicone sealant to adhere the frame to the mud box. Apply the silicone to the under side of the frame.

7.25"

3.3"

2.75"

1.00"
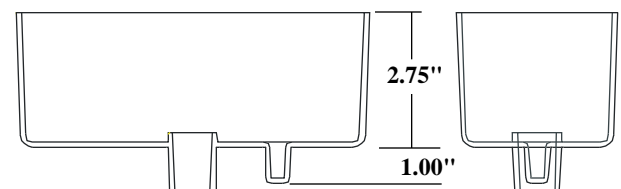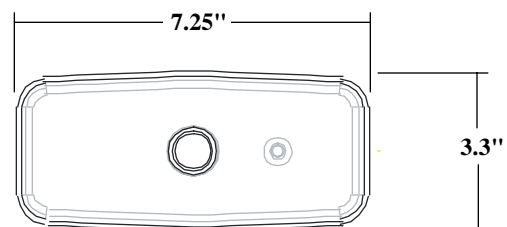
Installation Instructions:

The Jandy AquaLink RS and AquaRite use a 4-wire connection to communicate and can be wired up to 500' apart. Any outdoor rated 4 conductor cable can be used.

Locate appropriate screw terminals on the circuit board according to the diagram below (screw terminals are removable to aid in installation).

IMPORTANT: attach wires to like numbered screw terminals on both the AquaRite® and AquaLink RS. Use a Multiplex Kit if more than two items are connected to any 4-pin connector.

Jandy AquaLink RS
4-pin Connector

To Indoor
Control Panel

AquaRite
Control

240 VAC

English/Metric
Jumper

Standard Power Center

120 VAC
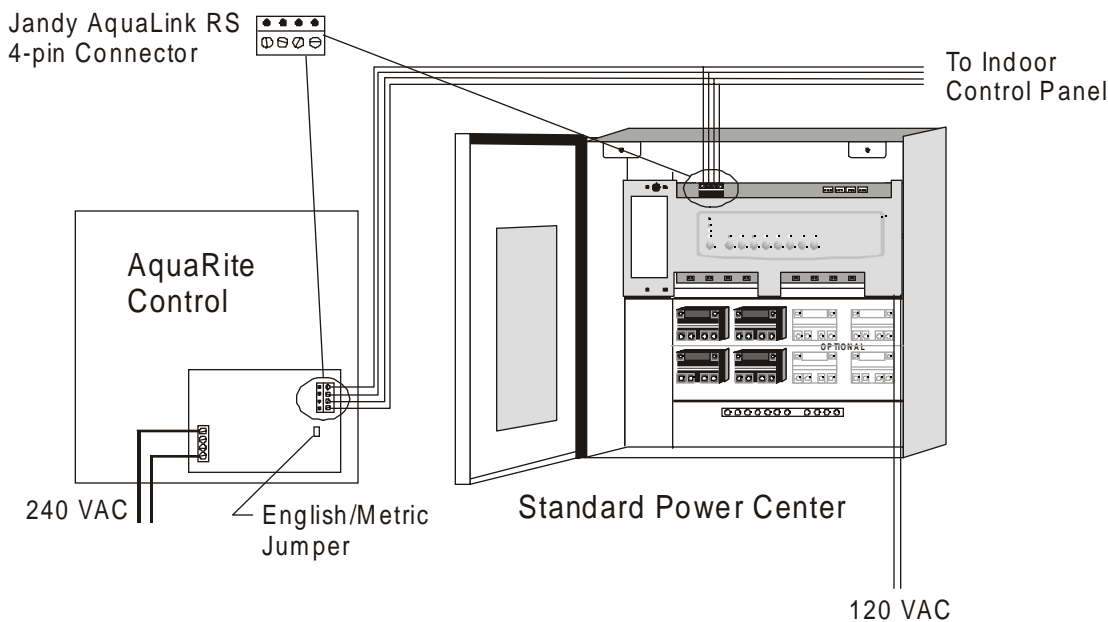
Power Center PPD Removal:

**Back View of Bezel Assembly
Power Center Printed Circuit Board
(Back of Power Center Board used with Pool/Spa combo unit only)**

Spare AUX

PPD Tool

**Programmable
Peripheral Device**

Pry Slots

Spare Aux -
**This socket has power only when the Filter Pump is
on and the pool water is circulating. It has no power
when the system switches to "Spa". It is used on a
pool/spa combination system when the user wishes
to turn off a piece of equipment (such as the
chlorine generator) while the spa is being used.
NOTE: DIP switch 6, in Rev. I software, changes this
operation to Spa mode**

**Using the PPD tool,
pry out the PPD evenly
on both sides.**

**Alignment
Arrow**

Beveled Corner

AquaLink® RS Troubleshooting Quick Check List

Symptom	Problem	Possible Solution
Power Center override switches operate when in Service or Time Out Mode, but the Controller is completely dead (no lights on, no display).	Power supply problem.	Check connection of the outside two wires (red and green) of the four conductor cable. If wired correctly, check the voltage between these two wires - voltage should be 10 VDC.
All LEDs are on at Controller and the part # and Rev letter of the Controller software are displayed (either 6553 Rev B01 or 6700 Rev C). The override switches at the Power Center operate as they should.	Controller is not communicating with the Power Center PCB.	Check the two center wires (black and yellow) of the four conductor cable. Also check the installation of the PPD on the Power Center PCB; if it is not seated properly the system will not communicate.
All LEDs on at Controller and the part # and Rev letter are displayed, but override switches at the Power Center do not operate at all.	1. Damaged or improperly installed PPD. 2. Damaged Power Center PCB.	1. Check alignment of the PPD. 2. If PPD is installed correctly, replace the Power Center PCB.
Some buttons do not operate from the Controller, nor from the Power Center override switches.	Wrong PPD chip installed at the Power Center PCB.	Check part number and revision letter by pressing the Reset button at the Controller. The second part number and Rev. letter displayed is for the PPD indicating which model.
System locked up.	Microprocessor locked.	Turn off power to system. Disconnect battery and turn on power. Reconnect battery and reset time and date.

Symptom	Problem	Possible Solution
System sometimes does not run programmed on and off times.	Power outage with dead battery.	At Controller, check battery level. With software level Rev. F or newer, battery status is located in Diagnostics section of System Setup Menu.
One button on the Four Function Switch or SpaLink RS does not operate.	Check programming first. If the Four Function Switch or SpaLink RS is programmed correctly, the button may be shorted.	Replace the Four Function Remote or SpaLink RS. Use MENU, REVIEW, SPA SWITCH (or SPALINK) to check programming
Pool cleaner booster pump turns on without the filter pump being on, and can run with the spa on.	System is not recognizing DIP Switch 1 is on. **NOTE:** Before turning on any DIP Switches, first turn off all equipment.	Turn off all equipment buttons, then turn off power to system, finally turn off, then on, DIP Switch 1. Turn on power and test system.
Cannot assign Cleaner JVA.	DIP switches not set correctly.	DIP Switch 1 must be off, and DIP Switch 7 must be on to assign the Cleaner JVA to an auxiliary (Rev F or older).
Model is one of the AquaLink RS Dual Equipment, message scrolls "Adjustable Freeze Sensor Not Installed".	Normal operation when a Dual Equipment AquaLink RS is controlling a solar system and an adjustable freeze sensor is not installed.	Either install the adjustable freeze sensor, or wait 24 hours and this message will go away.
System comes on at times that are not programmed.	Phantom programs.	At Controller press Menu, then scroll, to REVIEW. Make note of all programs, Four Function Switch setting, labels, and temperature settings, then turn off all DIP switches and go to the Controller. CLEAR MEMORY, reprogram and try system again.
Heater will not fire. Heater LED will not light in "Service Mode".	Water temperature sensor not installed or defective.	Check water temperature sensor.

Installation Guidelines (also includes propane heaters)

General Heater Wiring Guidelines:

Electric Heaters and Heat Pumps

This instruction sheet is for low voltage heaters. Do not attempt to connect a heater with a high voltage (110 or 220 VAC) thermostat into the low voltage heater terminal bar.

Natural Gas Heaters and Propane Heaters

1. Connect two 18 gauge wires, designed for use in hot environments, to the proper terminals on the Heater Terminal Bar.
2. Bring two heater wires from the AquaLink RS P.C. Board over to the heater and wire in series with the heater circuitry as if you were wiring a fireman's switch or heater delay.
3. Do not disconnect high limit or pressure switches.
4. Turn the heater thermostat(s) to maximum setting.
5. Turn the heater toggle switch to ON.

HEATER WIRING

RS BEZEL/PCB
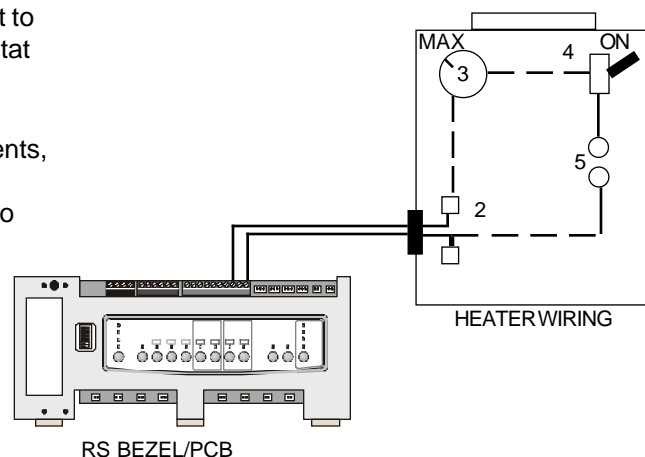
Guidelines for All Laars Heaters (except Laars LX):

1. Remove the heater service door.
2. Remove the factory-installed wire between Terminal 1 and Terminal 2 on terminal strip (see diagram at right).
3. Connect the wires from the AquaLink RS P.C. Board to the two terminals. Teledyne Laars requires heater hookup wires to be AWG 14-gauge copper with a temperature rating of 105°F or higher.
4. Set the thermostat selector switch to ON, HIGH or SPA and set the heater thermostat(s) to maximum.

Typical Laars Lite Heater Connection

Heater Wiring Before Modification	Heater Wiring with AquaLink RS
To Limit Switches	To Limit Switches
White / Factory Installed Wire / White	White / To AquaLink RS P.C.B. / White
Fusible Link	Fusible Link
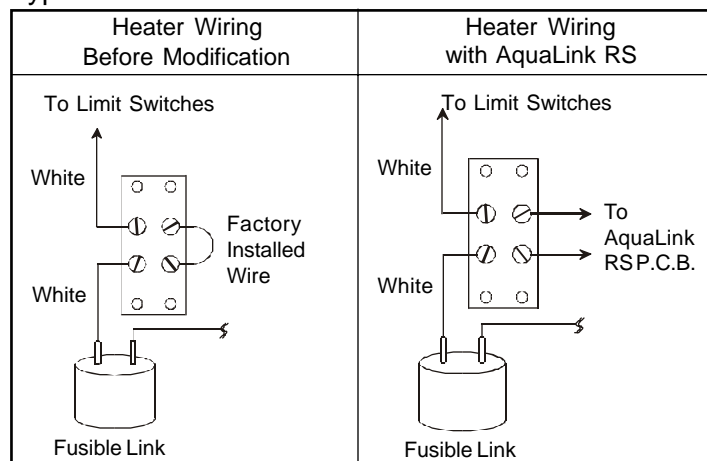
Typical Laars LX/LT Heater Connection

Guidelines for Laars LX Heaters

1. Remove the LX GUI from the heater.
2. Run 4conductor cabel (red, black, yellow green) from the LX GUI red 4 pin terminal bar to the RS Power Center red 4 pin terminal bar.
3. If connectingmore than 2 items to the RS Power Center red 4 pin terminal bar, a multiplex PCB is required.

Indoor Controller

RS Control System

22 Gauge, 4 Conductor Wire

1 RED
2 BLK
3 YEL
4 GRN
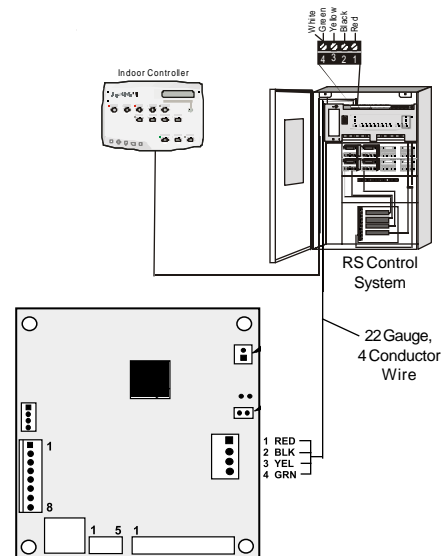
Installation Guidelines (Continued)

Guidelines for RayPak Heaters:

For RP2100: (Models: P-R185A to P-R405A, C-R185A to C-R405A, P-R185AL to P-R405AL, C-R185AL to C-R405AL, from Catalog #6000.52-X)

1. For the 2-wire/1 function configuration, connect the orange/black and black/orange wires to one contact and the yelow/black wire to the other contact.

Typical RayPak Heater Connection

Heater Wiring with AquaLink RS

To AquaLink RS System

P7 Terminal
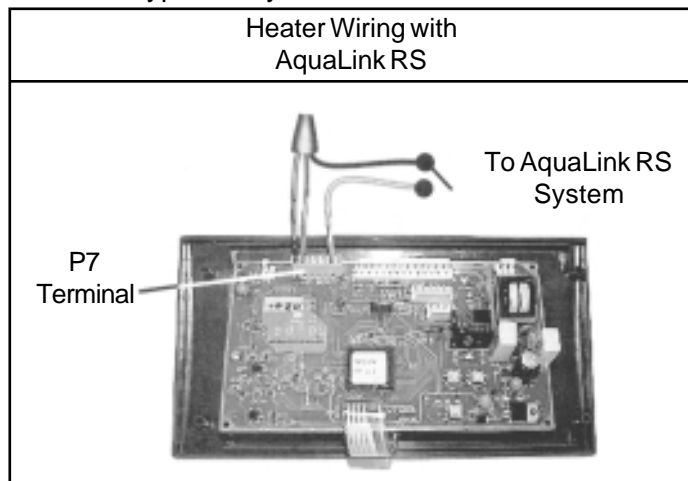
Guidelines for Purex Heaters:
For MiniMax and Tropical Isle Pool and Spa Heaters:

1. Remove the heater service door.
2. Separate the black wire (common) from each other (see diagram at right).
3. Connect the wires from the AquaLink RS P.C. Board to the two black wires as shown. The violet and red wires remain unused.
4. Turn heater toggle switch ON, and thermostat(s) to MAX.
5. When connecting an AquaLink RS Controller to a Purex heater, Purex requires that you install the low voltage thermostat wires in separate conduit from ANY line voltage wires. Failure to do so will cause the thermostat relay to react erratically.

Typical Purex Heater Connection

Heater Wiring Before Modification	Heater Wiring with AquaLink RS
VIO	VIO
BLK	BLK
BLK	BLK
RED	RED

RS Wires
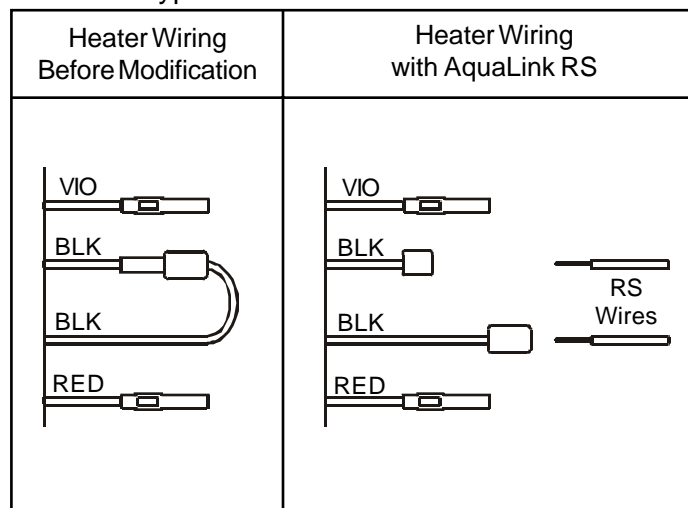
Guidelines for Hayward Heaters:
For HM2 Models 150, 200, 250, 300, 350 and 400:

1. Remove heater service door.
2. Remove factory-installed wire-nut between two red wires labeled "CONNECTION FOR FIELD INSTALLED CONTROL SWITCH".
3. Wire-nut two heater wires from AquaLink RS P.C. Board to the two red wires as shown in the diagram to the right.
4. Set the thermostat selector switch to ON, HIGH or SPA and set the heater thermostat(s) to maximum.

Typical Hayward Heater Connection

Heater Wiring Before Modification	Heater Wiring with AquaLink RS
Limit Switch **Limit Switch**	**Limit Switch** **Limit Switch**
Factory installed wire nut	**Wires to AquaLink RS**
Pressure Switch	**Pressure Switch**

PROGRAMS — **Select Device To Be Canceled** — **CANCEL SOME** / **CANCEL ALL**

FRZ PROTECT — **Press ENTER to Remove All Devices Except Pump from Freeze Protection or Cancel to Abort**

AUX LABEL — **Select AUX to Remove Label From** — **Label Removed**

DIMMERS — **Press ENTER to Cancel Dimmers or Cancel to Abort** — **Select AUX to Remove Dimmer From**

JVA ASSIGN — **CLEANER JVA** / **SOLAR JVA** — **No JVAs Assigned to AUXs**

LOCKOUTS — **SYSTEM** / **SPA SWITCH** / **SPA LINK** / **DEVICE** — **UNLOCKED**

All Button Control Panel Menu Flow Chart

PROGRAM → Select Equipment → PROGRAMS

PROGRAMS
TEMP SET
SPA SWITCH

REVIEW → SPA LINK

FRZ PROTECT
AUX LABELS
DIMMERS
JVA ASSIGNS
LOCKOUTS

On All Days
On Weekends
On Weekdays
On Specific Day

SET TEMP → POOL TEMP / SPA TEMP

SET TIME → Set Year, Day, Hour & Minute

LOCKOUTS → SYSTEM / SPA SWITCH / SPA LINK / DEVICE

PGM GROUP → GROUP A / GROUP B

DISPLAY LIGHT → ON / OFF → Select Equipment → Main Label Menu

SYSTEM SETUP
- LABEL AUX
- SPA SWITCH → 1 SWITCH / 2 SWITCHES / 3 SWITCHES → Assign Buttons
- SPA LINK → 1 SPA LINK / 2 SPA LINKS / 3 SPA LINKS → Assign Buttons
- FRZ PROTECT → Assign Items / Temp Settings
- AIR TEMP → ON / OFF
- DEGREES F/C → Fahrenheit / Celsius
- TEMP CAL → Temp Down / Temp Up
- ASSIGN JVA → Choose JVA → Choose Button
- SET DIMMERS → Select Equipment
- DIAGNOSTICS → Diagnostics Readout
- CLR MEMORY → Warning! Clears All Memory

Aerator
Air Blower
Backwash
Booster Pump
Chem Feed
Cleaner
Color Wheel
Drain Line
Fan
Fiber Optic
Fill Line
Filter Pump
Floor System
Fogger
Fountain
Heat Pump
Heater
Hi-E2
High Speed
Home A/C
Home Heat
Jet Pump
Laars Lite
Lamp
Lights*
Low Speed
Maxx Pure
Mist
Music
Not Used
Ozonater
Pond
Ray-Vac
Slide
Solar Pump
Spa
Spillway
Sprinklers
Stereo
Stream
Swim Jet
Timed Aux
Valve(s)
Wtr Feature
Waterfalls*
Whirlpool

*Item has sub-menu

Back Light
Basement Light
Beach Light
Bedroom Light
Bug Light
Cabana Light
Color Wheel Light
Deck Light
Dock Light
Drive Light
East Light
Entry Light
Equipment Light
Fan Light
Fence Light
Flood Light
Fountain Light
Front Light
Garage Light
Garden Light
Gazebo Light
Hall Light
House Light
Kitchen Light
Left Light
Light
Light 1
Light 2
Light 3
North Light
Path Light
Patio Light
Perimeter Light
Pond Light
Pool Light
Porch Light
Right Light
Room Light
Sauna Light
Security Light
Shower Light
Shrub Light
South Light
Spa Light
Statue Light
Steps Light
Table Light
Tier Light
Tree Light
Walk Light
Waterfall Light
Wtr Feature Light
West Light
Yard Light

Waterfall
Waterfall 1
Waterfall 2
Waterfall 3
Shr Descent
Rockfall

ONETOUCH ON/OFF — ONETOUCH 1 / ONETOUCH 2 / ONETOUCH 3 — ON / OFF

EQUIPMENT ON/OFF — Select Equipment — ON / OFF

MENU/HELP

- **HELP**
  - KEYS
  - SERVICE
  - DIAGNOSTICS — NEXT
  - GO BACK
- **PROGRAM** — Select Equipment — ADD PROGRAM
- **SET TEMP**
  - POOL HEAT
  - SPA HEAT
- **SET TIME** — Set month, day, year, and time
- **DISPLAY LIGHT**
  - ON
  - OFF
  - 2 MIN. DELAY
- **LOCKOUTS**
  - SYSTEM — LOCK / UNLK
  - SPA SWITCH
  - SPA LINK
  - DEVICES — Select Device — LOCK / UNLK
- **PROGRAM GROUP**
  - GROUP A
  - GROUP B
- **SYSTEM SETUP**
  - ONETOUCH — ONETOUCH 1 / ONETOUCH 2 / ONETOUCH 3 — SELECT NAME / CUSTOM NAME / SET DEVICES — Select Device — ON / OFF
  - LABEL AUX — Select AUX — GENERAL LABELS / LIGHT LABELS / WTRFALL LABELS — Select Label / CUSTOM LABELS (Type Personalized Description)
  - FREEZE PROTECT — TEMP — Select Device
  - AIR TEMP — ENABLED / DISABLED
  - DEGREES C/F — FAHRENHEIT / CELSIUS
  - TEMP CALIBRATE — TEMP
  - IN FLOOR CLEAN — ENABLED / DISABLED
  - SOLAR PRIORITY — ENABLED / DISABLED
  - ASSIGN JVAs — INTAKE / RETURN / CLEANER / SOLAR
  - DIMMERS — OK / GO BACK
  - COLOR WHEELS — OK / GO BACK
  - SPA SWITCH — 1 / 2 / 3
  - SPA LINK — 1 / 2 / 3
  - PRODUCT INFO
  - CLEAR MEMORY

Freeze/Air Sensor
Water Temp. Sensor
Solar Sensor

Green
Yellow
Black
Red

Red
Black
Green
White
Brown
Blue

Not Used
Not Used
Red
Black
Red
Black

Low Voltage Heater

Return JVA
Solar JVA
Elect. Heater

Intake JVA
Cleaner JVA
Solar Pump

4 3 2 1   6 5 4 3 2 1   10 9 8 7 6 5 4 3 2 1

To Controller
(red term. bar)

To Remote
(brown term. bar)

To Sensors, etc.
(green term. bar)

JVA Sockets
(24 VAC output)

Relay Sockets
(24 VDC output)

Dip Switch Settings

Factory Set	Optional Set
# OFF	ON
1 Aux 1	Cleaner
2 1 spd pump	2 spd pump
3 Aux 3	Spa Spillover
4 Cool Down	Disabled
5 See Manual	See Manual
6 Spare Aux Pool	Spare Aux Spa
7 Not Used	Not Used
8 Gas Heater	Heat Pump

Relay Sockets (24 VDC output)

F.Pump   Aux. 1   Aux. 2   Aux. 3

Relay Sockets (24 VDC output)

Aux. 4   Aux. 5   Aux. 6   Aux. 7

Battery
(9 Volt)

Low Voltage Raceway (do not run high voltage wire in this compartment)

Filter Pump Relay

Aux. 3 Relay

Aux. 4 Relay

Aux. 7 Relay

Aux. 1 Relay

Aux. 2 Relay

Aux. 5 Relay

Aux. 6 Relay

Line One
Load One
Line Two
Load Two

Grounding Bar

System Power

Wire Nut to
120 VAC Power

C **ETL** US

LISTED

**Listed 4J39
Swimming Pools
& Spa Controllers**

U L

C E

Jandy®
Control Systems

waterpik
Technologies, Inc.

Sheet #6594, Rev E, 9/01   For Technical Support call 707-776-8200, ext. 260